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A new business model for footwear enterprises:

Bespoke shoes

The Riviera del Brenta Case

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“L’industria italiana si è spostata verso l’alto di gamma e verso produzioni su misura che interpretano i bisogni degli acquirenti. Tali produzioni richiedono un maggior valore aggiunto rispetto alla produzione di massa, perché implicano maggiori studi di progettazione, capacità di adattamento alla clientela, assistenza post-vendita, attività di marketing e di advertising, maggior cura nell’esecuzione dei lavori.”

Cipolletta, l’Industria, Il Mulino

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Abstract

This thesis has the aim at analysing a new business model in which traditional manufacturing and digital technologies work in symbiosis in order to allow companies to realise bespoke products. In particular, the focus will be on the Luxury Footwear District of the Riviera del Brenta: actually, national and international luxury brands have chosen the district because of its long history, tradition, skilled artisans, high quality, and Made in Italy products. On the other hand, digital technologies have invaded each industry, modifying the way companies do business, and allowing them to realise bespoke products. The footwear industry is an example of the union between traditional manufacturing and digital technologies: a binomial which is able to realise a strong personalisation, both involving technologies and customers. The first chapter describes the evolution of the relationship between production and consumption, in comparison with the evolution of technologies; the second chapter presents the Luxury Footwear District of the Riviera del Brenta – a district 4.0; the third chapter analyses a new business model with the objective at present a bespoke shoe; finally, in the fourth chapter some case studies are analysed in order to verify the level of digital technologies in manufacturing enterprises and the feasibility of the new business model.

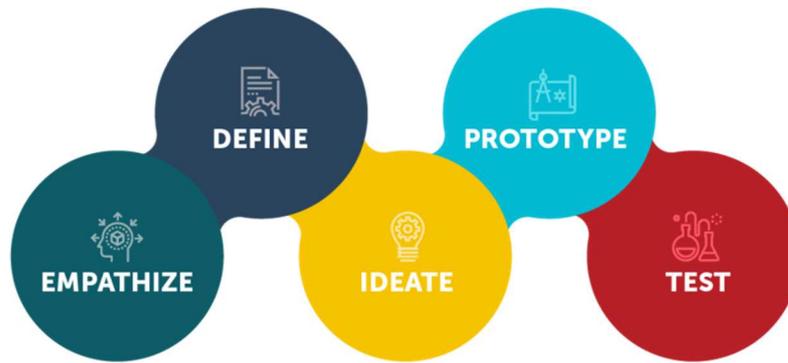
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The Contamination Lab

Some months ago, I had the opportunity to participate in a lab organized by the Ca' Foscari University of Venice. This lab was called Contamination Lab: it was organised with the aim to solve, in an innovative manner, an enterprise problem through the Design Thinking method. Only 70 students among high schools, universities, and graduated students, could enter: and, after a long selection, the coordinators created 10 heterogeneous groups of 7 people, each coming from different faculties. Besides, we had the support of a start-up – Azzurro Digitale – which provided us the knowledge about Design Thinking and Open Innovation. But what is really the Contamination Lab? It can be explained as a work group, each supported by a coordinator who had already done a similar experience; and the aim of this Lab was to find an innovative solution to a challenge given by the representatives of the Riviera del Brenta enterprises and associations, known worldwide as the luxury footwear district. We had only five weeks to study, gather information, and ideate the solution, in order to respond to the challenge and solve the problem, following the steps of Design Thinking.

The peculiar potential of this method is that it allowed us to pass through the *knowledge funnel*: first we created many possibilities (ideas), without applying any kind of judgment, in order to boost creativity; then we tested our solutions in order to assess their potential; finally, we chose the solutions that provided the highest value for the customers – in this case, our customers were the representatives of the Luxury Footwear District of the Riviera del Brenta, those who gave us the challenge. Actually, every week we had a mission, it means that we followed a clear process made of five phases: exploration, definition, ideation, prototyping, and testing, in order to arrive to the last week presenting our innovative idea.

The whole process allowed me to discover the Luxury Footwear District, to study it closer, to understand its strengths and weaknesses, and finally to inspire me for the master thesis. Therefore, let's see how the process worked.



Exploration phase. It is the first phase, which corresponds to the first week. We received our challenge by Mr. Tesaro – the Director of the Footwear Design School called Politecnico Calzaturiero -: he wanted us to understand how to attract tourists in Riviera del Brenta, making them know the ancient crafts of the footwear district. In this phase, the groups had to define the target to which address the challenge, studying their life styles, demographic characteristics, and personalities. In particular, we chose two targets: firstly, the students coming from high schools, who were considering post-graduate courses about fashion, or art, or design; secondly, the students from the Politecnico Calzaturiero, so that we could understand the motivations for which they chose that educational path. We proceeded creating on one hand, an online questionnaire that we put in many web sites and social network groups; on the other hand, two interviews: one addressed to high school students, the other one addressed to university students.

Definition phase. During the second week, we analyzed the findings of our questionnaires and interviews, trying to gather all the needs of people we interact with. This phase was very important, because we did understand the real problem: many tourists, both Italians and foreigners, did not know the Riviera del Brenta and the beauty represented by its territory and its villas. We proceeded in two ways: firstly, we analyzed some similar case studies that could help us dealing with the problem; secondly, we created two “personas” writing down their character profile which embodied our observations; and then we tried to understand their needs and how to satisfy them.

Ideation phase. We arrived at the middle of this process, it was time to create a big set of design alternatives. The most efficient way to gather many and different ideas is brainstorming: we started synthesizing all the information we had, and we did some “How might we...?” questions in order to launch the brainstorm. Randomly, we chose a word, and consequently we derived other words, some of them were obvious and intuitive, but

other were new and different. This process lasted more than an hour, and then we proceeded ordering the words categorizing them with some key-words. Finally, we selected the most important ideas and deleted the less useful ones.

Prototyping phase. With all the ideas that we gathered during the brainstorm, we selected two main solutions. In this week, we had to create the prototypes of our solutions and test them. Actually, with the suggestion of our tutor, we did another questionnaire, more detailed than that of the first week, so that questions were focused on our solutions: our objective was to receive some feedbacks from both high school students and the Footwear Polytechnique students, without presenting our ideas, but just investigating and exploring, in order to understand if our path was the right path. Immediately, we received some positive and negative feedbacks, so we could understand what people really liked, and consequently we proceeded creating the prototypes.

Testing phase. We did test our prototypes but to a limited target. However, we saw that they received many positive feedbacks, and people personally confirmed our results of the second-online questionnaire. Besides, we refined our prototypes with the suggestions made by people, and we understood the real importance of iterative tests – which means that repeated tests are useful because they allow to make some modifications each time users give their feedback.

As the result of this intense experience, I can say I got contaminated by this lab, because I had the opportunity to discover the luxury footwear district and to learn how to make a shoe. But most of all, I understood the value of the Italian manufacturing, which is, on one hand, strictly tied to its territory, its culture, and its tradition; and on the other hand, yearning to innovate approaching new digital technologies.

Introduction

We are all aware by the fact that our country has always been the homeland of traditional, high-quality, and original manufacturing. The Made in Italy label is founded on specialized competencies and skills which are located in many small enterprises or little studios, rather than in large multinational companies. What is more, if we focus on the Veneto region, we can observe that its territory is the seat of many important districts, where specialized employees and cooperation have been developed. However, some negative factors, such as outsourcing and the economic crisis of the last decade, have changed the business models of many enterprises, which have decided to get more contaminated by technological innovation of the Fourth Industrial Revolution, in order to respond to a new demand, more and more requiring and customised, not just in a target manner, but rather taking desires, preferences, and needs of an individual person.

Therefore, starting with an analyse of the manufacturing evolution through the last century, the master thesis has the aim to deepen the dynamics which have caused the change of many business models and which have also allowed many enterprises to integrate technological innovations with the Made in Italy know-how - placing the focus on Footwear Enterprises of the Riviera del Brenta District – with the objective of producing bespoke goods, in contrast with mass products.

The first chapter describes the most important phases that retrace the evolution of craftsmanship, starting from the pre-industrial era, passing through all the decades of the XX century, in which production was subjected to many mutations – from mass production, to mass customisation -, until our days in which customization and bespoke goods are demanded by the majority of consumers.

The second chapter starts with a general definition of Districts and how they achieved important results after the economic crisis of 2008, until arriving at a 4.0 District. The chapter proceeds with the history of the Luxury Footwear District of the Riviera del Brenta, and then it deals with competitive factors which have straightened the footwear district through the centuries, such as its territory, its culture, its local institutions, and its small but skilled enterprises.

The third chapter focuses on the 4.0 District and, in particular, it builds a brand-new business model for footwear enterprises, based on the integration between craftsmanship and technological innovations, in order to respond to a customer's demand more and more sophisticated and individual.

Finally, the fourth chapter presents many case studies for the Riviera del Brenta enterprises, in order to observe how they could adapt the business model to the epoch of the Fourth Industrial Revolution.

At the end of the thesis, there are the Conclusions and the Appendix A, which makes a list of questions for the interviews to enterprises.

Chapter 1

1.1 The evolution of craftsmanship

For centuries, the image of craftsmanship has always been connected to the image of men in their small studios, creating hand-made and bespoke products of high quality and precision, and using their particular but simple instruments, in order to meet customers' specific demand. Actually, craftsmanship has always been a particular production method which has entailed a strong and long-lasting relationship between the artisan and the client, because the client had specific requests and the artisan could efficiently satisfy them making personalised products for him.

Focusing on the Italian culture, this image represented and still today represents the core business in any kind of sector: jewellery, apparel, footwear, but also furniture and automobile, and this is the reason why the "Made in Italy" label has always had an important value worldwide. In fact, when we talk about Made in Italy, we refer to craftsmanship tied on one hand to the characteristics of the product – such as quality, style, customisation – and on the other hand, to the context and environment in which products are created – such as culture, history, territory and heritage.

How did craftsmanship evolve and progress during the centuries? It is important to emphasize each stage of the evolution of craftsmanship in order to understand why nowadays it is still crucial for our economy, and which differences are present. This is the reason why the first chapter deals with the evolution of craftsmanship from the pre-industrial era, passing through the years of the twentieth century in which production was subjected to various transformations, until arriving at the progress of our contemporary era.

Before the First Industrial Revolution, at the end of the XVIII century, the world lived the pre-industrial era: moderate volumes of production were achieved, and activities rhythm was restrained. Actually, craftsmanship and agriculture were the main production activities: according to data, circa 85% of the Gross Domestic Product (GDP) came from agriculture, and the rest came from craftsmanship (Amatori & Colli, 2011). If we make

a parallelism between production and consumption, we can say that there was a closer relationship between the producer - called artisan - and the client: consequently, the artisan was able to respond to all desires and needs of customers, creating a very bespoke product.

Things began to change with the First Industrial Revolution, at the end of the XVIII century. Many innovations were introduced in the agricultural field as well as in manufacturing. The first enterprises were born in that period: most of them were family businesses located in the countryside, with sporadic contacts with the market, and in fact products at most were directed to self-consumption. Some years later, enterprises began to rise in urban areas so that they could be located near the source of raw materials and where energy was easily available. What is more, enterprises began to enlarge their limits, exporting in other cities a little percentage of their production. The characteristics of those enterprises were the fact that they were based on craft production, which involved skilled workers and a high level of specialisation. It was in those years that the first clusters were born: people began to move to urban areas, and the result was a concentration of skilled workers who could operate in an efficient manner. One of the disadvantages of clusters was the impossibility to produce economies of scale: this because the only way to increase volumes of production was hiring more people, since there were not specialised machineries that could optimise work, yet.

However, at the end of the XIX century, with the arrive of the Second Industrial Revolution, new techniques and innovations were introduced within the production process. Gradually, craftsmanship was replaced with mass production, which lasted for more than 30 years, as long as customers began to ask products to be more personalised, valued and refined, or in other words: nearer to customers' desires.

1.1.1 1900: The Production Era

The first middle of the XX century has been characterised by the beginning of mass production. The workforce became more concentrated, and enterprises started to enlarge and become big businesses. That is the reason why mass production definition refers to “a production system based on big enterprises which create a huge amount of standardised products in a repetitive manner”. Mass production started when the Second Industrial Revolution was already developed, and when new technological innovations - such as

specialised machineries and artificial energy - were introduced into the firms so that they were able to optimise work processes as well as productivity. In those years, it was possible to observe the change of the relationship between production and consumption: from craftsmanship where products were hand-made, personal and bespoke because they derived from clients' requests, to an industrial production which was mechanised, automated, standardised, and most of all, impersonal.

Mass production has been developed in the United States thanks to two pioneers: Henry Ford and Frederick W. Taylor. Henry Ford was the founder of the automobile enterprise of the same name, and he was the first person who created automobiles with the application of mechanic machines and the invention of the assembly line: this allowed workers to stay in their places while materials moved from one place to another. This kind of production was improved by the introduction of the Scientific Management Theory of Taylor: he proposed a new manner to enhance and optimise workers' productivity in decomposing their complicated and long gestures into smaller, simpler, elementary gestures; this allowed entrepreneurs, on one hand, to hire less specialised and less qualified workers and, on the other hand, to save money because less qualified workers were paid less than qualified workers. What is more, he imposed to workers a salary strictly tied to their performance: if a worker had not reached his daily production objective, then he would not have been paid like another worker who had reached his daily production objective.

In general, mass production allowed workers to be more efficient and speedier in their work, with two important results: firstly, enterprises were able to produce a high quantity of standardised goods; secondly and consequently, they could reduce costs of production through the creation of economies of scale. This is the reason why, during the mass production era, many enterprises became bigger and bigger: because economies of scale took advantage of the increase of the volumes of production, reducing the costs per unit (Amatori & Colli, 2011). Besides, economies of scale exploited the replicable knowledge: which means that the workers' repetitive gestures tended to reduce costs until their annulment.

Mass production was strictly tied to mass consumption, which was characterised by two main aspects: the first was the customers' money saving and the second was the quality and customisation sacrifice of goods. Actually, those decades were gathered under the

name of Production Era since consumers' demand was larger than firms' supply; as a consequence, the aim of the firms was to produce in large scale, as much as possible, taking advantage of economies of scale and replicable knowledge.

Nevertheless, mass production presented many disadvantages, as well. Since most entrepreneurs adopted the assembly line along with the scientific management, firms resulted to have a rigid structure. It is true that low competition among enterprises created a stable environment, however they were not flexible enough to deal with problems or unexpected events. And this is what happened in the 1930s.

Things began to change when a set of factors happened between the 1920s and 1930s: the end of the First World War, the European totalitarian regimes, and the economic crisis, which caused the drop of consumptions, and, as a consequence, firms were obliged to manage their businesses and turn them into something new.

1.1.2 1930: The Sales Era

As said previously, the 1930s were the years of the Great Depression: it was ten years since the First World War was finished, but the totalitarian regimes had taken the power governing the most important European States with bad effects also for the other States, in terms of economic aspects as well as social aspects. What is more, the economic crisis of the 1929 – the Wall Street crisis – hit the United States and consequently all the other States all over the world. The crisis caused the drop of consumptions and production, as well as the change of the business culture. Enterprises had to deal with a huge problem: they could not afford producing the same big quantity as in the production era. Mostly because demand from consumers was lower than firms' supply. Besides, competition among enterprises was becoming more and more intense and dynamic in comparison with the production era. Therefore, firms had to turn their business models into something different, they needed to succeed, because they had to emerge among other companies; finally, their structures had to become more flexible in order to respond efficiently to environment variations.

How could enterprises respond efficiently to the crisis? On one hand, they had to maintain the costs of production low, on the other hand they had to sell their products. However, the advantages derived from economies of scale were not possible anymore, since the

volumes of production steeply decreased. The best solution was to encourage people to buy again: therefore, companies decided to change their own business models, focusing on sales rather than production. That choice obliged companies to invest money in promotion, because, somehow, they had to convince people to buy their products rather than those of competitors. Two main strategies were designed by corporations: Marketing Management on one hand, and Research and Development, on the other.

It was in those years that Marketing Management entered companies: the aim was to spread a clear information about products in order to encourage consumers to buy. But the very first step was to understand who the consumers were and what their needs and tastes were: as a consequence, firms stopped to produce standardised goods and began to produce small amount of specific goods, aimed at different groups of homogeneous customers – the segments. Segmentation is a strategic analysis which allows enterprises to divide the market in many small homogeneous groups; as a consequence, companies can offer different goods for different segments.

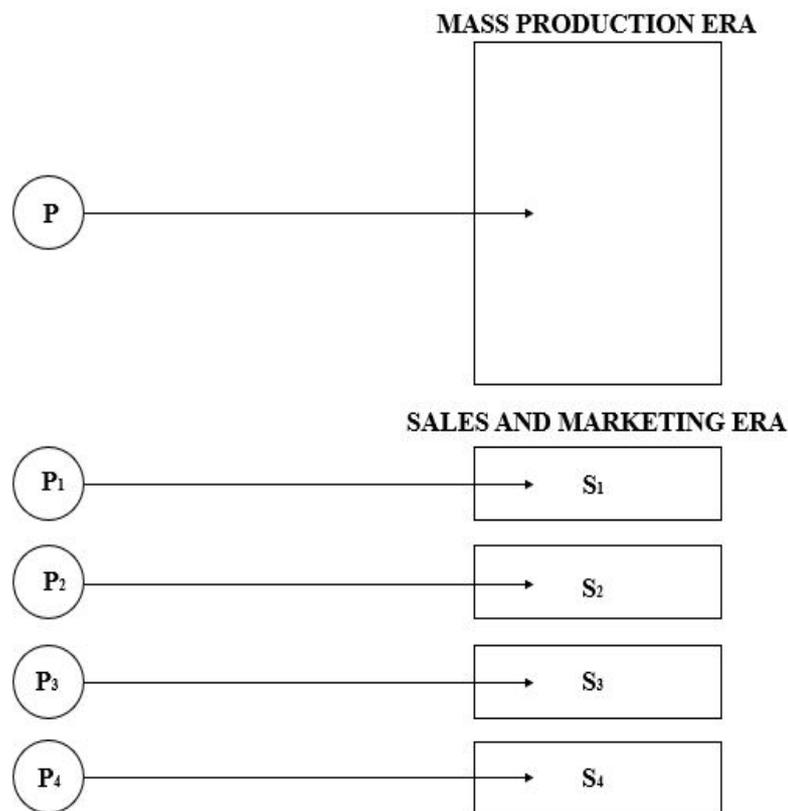
When managers understood how to make a segmentation of the market, their second step was to persuade people to buy their products. It was in those years that promotion through radio, cinemas, fliers, newspapers, was very intense. Each media had its kind of addressee: for example, messages in radio were addressed to the mass population, since it was the most spread media. Or, messages in newspapers were addressed to business people.

The second important aspect to underline was the Research and Development department which was introduced inside companies from the 1920s. It played a strategic role since it supported enterprises in studying the market development and searching for new technological innovations which could help in the conception of diversified products. Besides, R&D departments could also be led by universities as well as laboratories. Nevertheless, only few big enterprises could afford R&D departments, due to their high investment costs.

In the sales era, we can notice an initial removal from mass production of the previous decades: it was still modest the variety of goods industrially produced, but on the other hand, the production of standardised goods was decreasing due to the facts explained above in this paragraph. We can say that the sales era is an intermediate period which lasted few years: we can imagine it as a bridge between two important and longer periods

which have signed crucial changes in the business culture: on the left there was the production era, on the right there will be the marketing era.

The image below summarises the differences between mass production and sales and marketing production as far as segments are concerned. The upper part describes an enterprise which produces one single product – in large volumes – and it addresses it to the market, without making any differentiation among customers. On the other hand, the lower part describes an enterprise which has divided its market into four segments, and it produces a range of different products - with similar but not equal characteristics – addressing them to each segment.



Fonte: Marketing. Mercati, prodotti e relazioni (Grandinetti, 2014)

1.1.3 1960: The Marketing Era

In the previous era, production experienced some little variations. Especially at the end of the 1930s when mass production was lowering its volumes, due to the decrease of

customers' demand. What is more, after the economic crisis of the 1929, customers changed their way of buying and consuming: they became more requiring and they did not expect standardised products anymore. They began to demand more sophisticated products, with some personalised characteristics – personalisation meant in a target manner, not in an individual one. Besides, the competition was becoming more and more intense and dynamic: every single enterprise aimed at attracting customers to the detriment of other enterprises. As a response to those variations, enterprises began to segment their market in small different but homogeneous groups within which people had similar characteristics, similar consumer behaviours, and similar needs; and they began to offer a larger range of products addressed to different segments. This change on their business model required also a specific knowledge on promotion and communication about products: it was in the 1960s that marketing management entered companies as an important function for the corporate strategy in order to analyse the market, study the customers, understand their needs, and adapt the offer to them.

Furthermore, the 1970s were also characterised by the advent of the Third Industrial Revolution, which was based on the exploration of Information Technologies – such as computers and telematic instruments -. The Third Industrial Revolution signed a new era for enterprises, which had the opportunity to introduce automation to their business, with the aim at increasing the levels of productive efficiency. The disruptive technology brought a new wave of innovation, in which enterprises were pushed towards new technologies – such as computers, robotic, but also space shuttles.

Therefore, the marketing management became a strategic process for enterprises: it created an economic value for companies, and a perceived value for customers. But what is the difference between the economic value and the perceived value? The former stands for the price with which enterprises sell to customers; the latter stands for the price that customers are willing to pay based on their perceptions about goods. As a consequence, an enterprise needs to be able to communicate to customers a high perceived value in contrast with that of its competitors. What is more, the perceived value is strictly connected to the market position of the product. Actually, positioning is the perception that customers have in their mind about a good, or a brand, as compared to other goods, or other brands.

When we refer to marketing, we must mention Kotler, who is considered one of the biggest world specialists in management and, most of all, in marketing management. He was able to synthesize a clear difference between an enterprise addressed to sales, and an enterprise addresses to marketing: the former wants to sell all it produces; while the latter wants to produce all it can sell. Therefore, in 1930s enterprises produced many goods, and then they searched for manners in order to convince people to buy and consume them; in 1960s enterprises studied the market in order to understand customers' needs and then they developed goods enable to satisfy them and guarantee profits. This is the reason why the customer was not only the final addressee to whom selling goods, but also the starting point from which the company could develop the products (Grandinetti, 2014). However, it is important to underline that in the marketing era, markets were easy to decode and generally stable. As a consequence, enterprises had not problems with studying the market, creating segments and understanding the needs of consumers.

With the aim at developing a successful marketing strategy, enterprises had built a dense network of relationships with customers. Precisely, we are referring to the relationship marketing: on one hand, companies need to deeply know their customers in order to obtain the called "customers satisfaction", and on the other hand, they had to know the potential customers in order to enlarge the network of contacts. However, relationship marketing was born in the years of the marketing era, it developed during the mass customisation era in order to allow companies to create a large variety of goods which could be personalised, but it reached the top in the one-to-one era, when enterprises had a database in which they collected the data of each single customer. The next two paragraphs deal with this topic.

1.1.4 1980: The Mass Customization Era

In sales and marketing era it can be noticed that there was a removal from mass production: between the two world wars, enterprises began to respond to customers' requirements in a different manner in contrast with the way they responded in mass production era. This because people changed their habits after having experienced a tough economic crisis, which caused the fact that they bought less in terms of quantity; as a consequence, enterprises had to gain customers' fidelity again, trying to understand their

needs and desires, and offering products in order to respond directly to what people demanded.

However, customisation had high costs in comparison with mass production. On one hand, mass production was not expensive due to the fact that companies took advantage of economies of scale which allowed them to produce in large scale, reducing the cost per unit. On the other hand, during the sales and marketing era, enterprises had to sustain new costs, in particular, research and development and promotion costs, which allowed enterprises to gather information about the market and their target and to spread information about goods through mass media. What is more, they had difficulty in producing economies of scale for two main reasons: firstly, because people consumed and bought less due to the economic crisis; secondly, because products were less standardised, so the production process was not the same for the globality of goods, rather it differed for every range of goods.

During the 1970s and the 1980s, quality of life got better in comparison with past: the period after the two world wars was characterised by an economic “miracle”. Firstly, European nations had reached stable levels of development both in economic and social terms (Amatori & Colli, 2011). Secondly, competition was becoming more and more challenging for enterprises which, consequently, studied new strategies in order to succeed to the detriment of their competitors. Thirdly, consumers became more independent but also more demanding, and on the other hand, enterprises had to respond very rapidly to demand’s needs: the so-called “time to market” had to be short.

Therefore, how could enterprises compete in this environment? Certainly, three elements were crucial: flexibility, variable costs, and adaptability. Thus, in 1980s enterprises found a compromise in the cost and diversity trade off: the solution was called mass customisation. What does it refer to?

Mass customisation can seem a paradox since there are two words with opposite meanings: on one hand, customisation refers to the fact that goods are produced in order to satisfy individually customers’ needs; on the other hand, mass refers to that fact that enterprises want to safeguard cost benefits derived from economies of scale. Actually, mass customisation is a method of production which consists in the personalisation at low costs. Two main factors drove enterprises to change their business models and strategies: customers and technologies. Firstly, customers’ habits changed: they began to ask more

personalised solutions to respond specific requests or just to differentiate from the others. They simply became more independent and less subordinated by mass production. Secondly, technology evolutions in production and product development offered to enterprises the possibility to respond to demand variety.

How could enterprises produce customised goods at low costs?

For example, one solution was flexible automation systems such as CIM (computer integrated manufacturing), CAD (computer aided design), and CAE (computer aided engineering), which were driven by computers, and could carry out a huge variety of operations in a short time. For this reason, automation allowed enterprises to be efficient and flexible at the same time, producing a big variety of goods in small scale and at low costs.

A second manner was modularity. Modular products were a great innovation since they are composed of many little independent and standardised components which can be connected in many ways. The result was a huge variety of final products, that could be personalised according to customers' preferences. The basic example is the idea of Lego: there are many components with different shapes and sizes, but they have standard interfaces so that they could be connected creating brand new varieties of shapes and sizes.

Mass customisation was an innovative method of production: it seemed that there was a sort of return to mass production but actually there are many factors that differentiate these two methods. Firstly, in mass production standardisation was downstream since products were identical without any differentiation; with mass customisation variety moves downstream while standardisation moves upstream. Secondly, in mass production enterprises gained economies of scale in the final product; with mass customisation economies of scale were not gained in the final product but rather during the project process (Grandinetti, 2014).

Therefore, mass customisation, adopted by most enterprises, efficiently succeeded in responding market variations. Production and consumption, which distanced themselves during the years of mass production, now are reconciling: certainly, they proceed in two different rails, but they travel at the same speed.

1.1.5 2000: The One-to-one Era

Mass customisation could seem to be a permanent solution for enterprises and their business models. Nevertheless, variations in the economic, social, and political environments are always behind the corner. Already some years before the beginning of the XXI century the phenomenon of globalisation had started. It has been an important process in which enterprises have seen a competition becoming bigger and bigger, a global competition indeed. New countries that were emerging in the 1980s, became developed countries in the first years of the XXI century – such as China and India; besides, import and export trade intensified not only between countries of the same continent, but also overseas towards the United States, and towards the Far East.

Consequently, enterprises had to deal with a huge variety of customers coming from different countries and different cultures. What is more, customers changed again their way of buying and consuming. Thanks to the spread of internet, they became more curious and they began to search for deeper information about what they bought, and their requirements were becoming more and more individual. On the other hand, companies had to become more transparent about what they offered to the market, and they realised that needs and desires of consumers could not be divided into segments anymore. People began to ask unique and bespoke products, even paying a major price, in order to communicate their own identity and tastes and differ to the others; moreover, companies had to satisfy their singular demands. This is the reason why, in many sectors, segments disappeared because the relationship established between the producer and the consumer had become a one-to-one relationship, a sort of collaboration which allowed them to share information about what customers want and what the producer can offer.

How could enterprises manage a huge variety of customers with totally different tastes?

The beginning of the XXI century signed also the beginning of the Fourth Industrial Revolution, according to which new technologies and inventions were introduced to manufacturing – such as Artificial Intelligence, web economy, virtual reality, 3D scanners and printers. Most enterprises were able to take advantage of those innovative solutions in order to deal with a new kind of consumer. For example, enterprises adopted a new information system for marketing: the CRM – Customer Relationship Marketing. It gathers many instruments, among which there is the customer database, which can collect all the (demographical, geographical, psychological) information for each customer and

his history with the company – for example, what he bought in his last purchase, when he bought, how much he bought. This process allows enterprises to know very well each customer and to propose him a unique and bespoke solution. Another example is the introduction of new machineries such as the 3D printer and the 3D scanner which allow companies to create precise products that can be diversified for each customer.

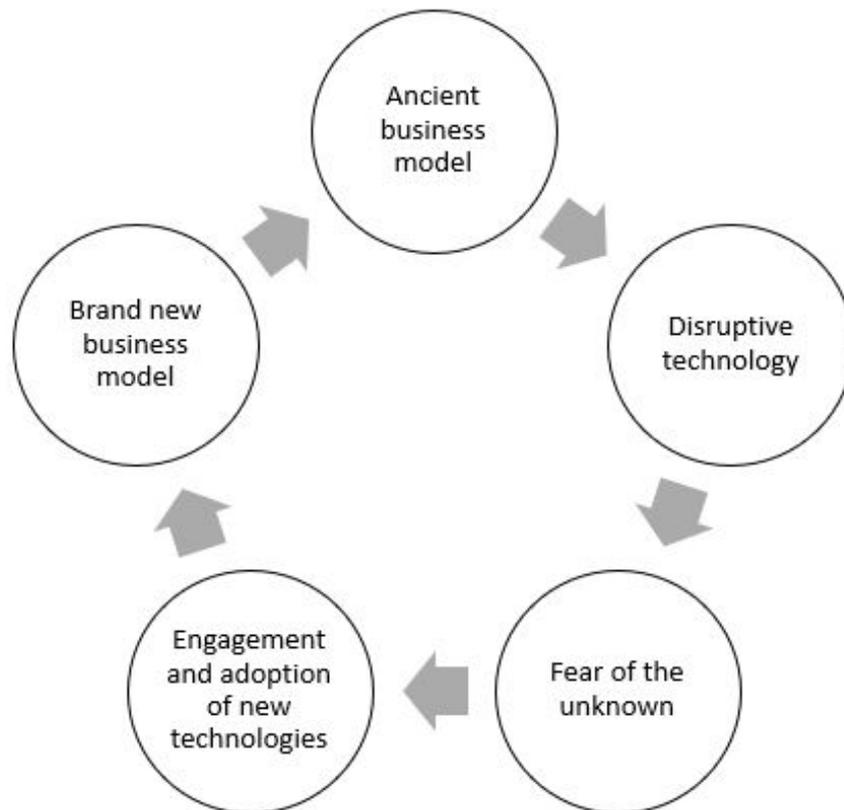
However, the beginning of the XXI century was also signed by the economic crisis of 2008, which caused a reconsideration about consumer habits: actually, people began to think about what and how they bought, and they realised that characteristics – such as origin, quality and sustainability of the products -, to which they have always paid less attention, now have gained more consideration (Micelli, 2016). Before buying, customers make research in order to be sure about the provenience of products, the reliability of producers, and, if possible, they read reviews written by other users. From the point of view of companies, they tried to respond quickly to the new consumer variations, opening online platforms in which people could write and exchange their own ideas.

1.1.6 Disruptive Technology

During the centuries described in the previous chapters, it has been observed how economic history is cyclical: it starts with a revolution which destroys and modifies the preceding stable environment, people firstly are afraid of the unknown but then they react and engage to these variations and create a new stable environment, more innovative as compared to the older one. This is how disruptive technology works. And this is how industrial revolutions have always operated.

The crucial point is that the Fourth Industrial Revolution has been a turning point for production: on one hand, we have a comeback of craftsmanship, on the other hand we have the beginning of digital manufacturing. And curiously, these two elements began to work together. Certainly, it can seem a paradox due to the fact that craftsmanship is founded on culture, territory, skilled people, hand-made and bespoke products; while technology is founded on machineries and impersonalised and identical products. Therefore, these two elements can seem opposite, nevertheless, as disruptive technology theory explains, in the beginning, technology is disruptive, it destroys the ancient business model, and it creates fear among people, but in the end, people will engage to find a solution and exploit new technology to create a new business model which allows

craftmanship to work in synergy with technology. Therefore, after the economic crisis of 2008, which changed the consumer behaviours, customers want to return to craftmanship, in order to buy personalized and unique products. The only difference between the ancient craftmanship and the new one is the evolution of technology.



Fonte: personal elaboration

The spread of new technology has transformed the relation between production and consumption. Now there are two kinds of customers: on one hand, there are customers who want bespoke products and who entertain a strong relationship with the producer, who is the new modern and digital artisan; on the other hand, there are customers who want to be also producers because they discover the know-how and they want to express their own creativity (Bettiol, 2015). This is how a new society of “makers” was born: through internet and social media they create new relationships with people with the same

interests, they found communities and collaborate in order to ideate, design, produce, and sell their products, which normally are not available in traditional sale channels.

Business culture has changed, and craftsmanship is in the centre of it: Richard Sennett is one of the first who recognised in the craftsman the ability to build a new society in which “making things with hands” is not a mechanised process. Instead, there is the thought, the passion, the skills, and the experience, behind of it. This activity allows the artisan to incorporate intangible characteristics – such as culture, tradition, passion, style – into its hand-made products. (Sennett, 2008). Actually, most enterprises realise that business does not focus on the physical transformation of products anymore, but rather on the fact that the product incorporates intangible characteristics, such as uniqueness, recognisability, appreciation, desirability, experience. In the past, production was based on material characteristics, products responded to needs, and the economic value was evaluated on the costs of transformation processes. Now things have changed, production is based on the intangibility characteristics, products respond to desires, and the economic value is evaluated by society and culture. This means that the economic value of a good is tied not only to materials, but also to the value given by the customer. Nowadays companies are divided into two main categories:

1. on one hand there are companies (for instance, Apple) in which the value is created in the initial phases of the production process – which includes research and development, design, project – and in the final phases – which include distribution, sale, after-sale services -, while the middle phase – which includes production – can be transferred to countries where production and labour costs are low. A classic example is Apple, which certified that iPhones, Mac, iPad, are “designed by Apple in California, assembled in China”.

2. On the other hand, there are companies which have revaluated the importance of production and craftsmanship, so the value is in the initial, in the middle, and in the final phases: companies do not transfer production since manufacture cannot be imitated nor transferred.

Therefore, the Fourth Industrial Revolution has caused the disruption of the ancient production processes and the creation of a new business culture in which consumer and producer work together, or even they are the same person. Enterprises had to reconsider their strategic positioning, focusing on the differentiation strategy, so that they could offer

unique and valuable products thanks to the combination of tradition, design and innovation.

The next chapters deepen the discussion about the new modern and digital craftsmanship, and the processes through which companies are able to offer a bespoke product for their customers. In particular, the focus will be on the Luxury Footwear District of the Riviera del Brenta. The second chapter describes the history of the district and its characteristics, and it analyses its strengths and weaknesses as well as its competitive environment.

Chapter 2

2.1 Industrial Districts

2.1.1. Definition

English economist Alfred Marshall was the first who defined the concept of “industrial district” as a socio-economic entity, localised in a circumscribed area, composed of many enterprises, which take part in the same industry, and among which there is a relation of cooperation but also competition. Industrial districts represented an alternative organisation structure to the Fordist big business at the beginning of the XX century.

The characteristic traits of an industrial district are the following: a specific territory, a high productive specialisation, and an ensemble of enterprises. However, the most relevant, innovative and distinctive trait is the fact that the production process is not vertically integrated, but rather it is realised by the work division. This means that the district is specialised in the production of a final product, and the enterprises are specialised in a particular phase of the production process.

It is relevant to underline another aspect that characterises an industrial district, which is the presence of institutional actors – such as entrepreneurial associations, trade unions, local administrations, banks, schools, and chambers of trade. This aspect seems to stay background, but in the next chapters it will be presented as a competitive advantage for the Luxury Footwear District of the Riviera del Brenta.

The industrial district operates as a model of innovation and technologic development. Since enterprises cooperate and work in symbiosis, knowledge circulates and spreads fluidly: this knowledge transfer allows enterprises to find solutions to their problems and thus they innovate. What is more, through imitation – called Reverse Engineering -, other companies reply the same methodology, or they even modify and adapt it, and thus they innovate again. Innovative imitation is a recurring phenomenon inside industrial districts: this imitation is due to knowledge transfer which is permitted by a transparent and clear information among enterprises, and by the transfer of human resources. (Camuffo & Grandinetti, 2015)

2.1.2. Industrial Districts in Italy

Among numerous and different typologies of productive organisations, industrial districts mainly represent the Italian economic territory. Italian districts are mainly characterised by a large division of work among numerous small specialised enterprises, territorial concentration, entrepreneurial competences, cooperation and transparency among companies, and interactions with local institutions.

The affirmation of Italian districts dates back to some centuries ago, when some enterprises gathered in the same area, producing similar products or parts of them, and collaborated even being competitors.

In Italy, the phenomenon of the districts spread during the 1970s when the country experienced a recession period. In those years, many small enterprises struggled to resist to the market decline, due to the decrease of the demand of consumes. With the aim at surviving, they decided to congregate and collaborate in order to take advantage to their flexibility and rapidity of response to market mutations; as a consequence, they demonstrated to be able to satisfy specific needs – of niche. (Amatori & Colli, 2011)

One of the most relevant characteristics of Italian districts is the fact that they are related to the share of a common history, tradition, culture, and common values. This characteristic distinguishes Italian districts to big multinational enterprises. For this reason, small enterprises were able to easily collaborate because they had common values and a common tradition, fundamental elements for the creation of a strong and durable relationship. What is more, the growth of Italian districts was allowed by specific skills of employees, and by the acknowledgement among people and companies.

As mentioned in the previous paragraph, Italian districts are characterised by the division of work and thick exchange processes among small enterprises specialised in different phases of the productive cycle. This division of work allows the district to achieve high levels of productive efficiency also thanks to the dense network of relationships created both with upstream enterprises and downstream enterprises. According to this network, enterprises are able to easily control the whole process through which a good is realised, in order to verify the respect of quality levels agreed with enterprises. What is more, the network allows enterprises to collaborate in case problems or difficulties are arising, as a consequence, the district becomes a model of innovation and technologic development.

2.1.3. Economic Crisis: 2008-2012

The recession period caused by the world economic crisis has hit Italian manufacturing with deep consequences for many enterprises. The weakest actors – mainly very small enterprises - left the market, other actors succeeded and passed the crisis. For them, the path towards the end of the tunnel has not been simple: they had to change their strategy in order to adapt to that new competitive contest; many of them changed their business model, others changed their strategic plans; but as a whole, every single enterprise took its own individual path and reacted to market mutations successfully. (Distretti Italiani, 2013)

Despite the fact that the crisis has obstructed the growth path of most enterprises, districts have strengthened their strategic positioning: certainly, on one hand, districts have been downsized due to the closure of many enterprises; but on the other hand, they have enlarged their turnover subsequently to the expansion towards an international competitive arena. This has been possible thanks to the open-mindedness of districts and to their willpower which have allowed enterprises to fight for surviving. For instance, they have registered their brand, or patents or quality certifications at an international level, so that they could be known outside Italy, especially focusing on elements such as Made in Italy, culture, manufacturing, and style.

As a result, the weakest actors left the market because they could not handle the burden of globalisation: companies need to be prepared if they want to open their borders towards foreign markets, otherwise the risk of failure is behind the corner. When a company decides to sell in a foreign market, it must know the culture, the language, and the habits of that particular country; on the other hand, if a company acts blindly, then it is difficult for it to succeed. This situation happened for many enterprises during the recession period, even though we cannot say that it was the unique cause of failure.

As a consequence, districts became more concentrated, and business relationships changed: enterprises preferred more strategic actors able to bring added value and innovative solutions. Thus, the strongest enterprises succeeded and escaped from the crisis, even though with some injuries. Dynamic and advanced companies have been able to dimensionally grow, increasing their level of quality, as well as leveraging on a competitive advantage – such as patents, brands identity, and certifications.

2.1.4. After-crisis Districts

As observed in the previous paragraph, economic crisis years have been difficult for most districts. Unfortunately, many of them have died, but others have fought and resisted, changing and adapting to the new world conquered by globalisation. It is crucial to take into account the years during and after crisis in order to observe the evolution of district manners to handle market mutations. One of the most relevant aspects of those years has been the comeback of manufacturing as protagonist: in fact, Italy occupies a respectful position since it is second in Europe, after Germany, and fifth in the world. (Mc Kinsey, 2012)

This result has been possible also thanks to the degree of innovation of Italian districts and their performance during the economic crisis years, when they have been able to deal with crisis and strengthen their own competitiveness. The keys of their success are numerous: firstly, a tough propensity to export; second, the capability of dialogue with global markets; third, a strict control to extended supply chains. (Distretti Italiani, 2013) These aspects have contributed to the increase of competitiveness and innovation, without sacrificing manufacturing. What is more, Italian districts have been able to take advantage of an enormous inheritance: a know-how which exists for centuries, even since Middle Age. They have been capable to preserve, transmit, and ameliorate know how, skills, and competencies for centuries, until now.

The question is: which are the drivers that foster this long inheritance?

After having observed a district in a close range, it can be possible to declare that two factors are the main drivers which foster this long inheritance: relationship networks and internationalisation. In Italy, enterprises, which belong to a district, have a huge propensity at collaborating with suppliers, consultancy societies, and clients. However, other relevant actors to never forget are universities, educational institutes, and research institutes. As it will be underlined in the next chapters, for the Luxury Footwear District of the Riviera del Brenta, collaborations with institutes are the main competitive advantage, since the Footwear Polytechnique of the district is known both at a national and international level, and it boasts an important relationship with the Parsons School of Design in New York. What is more, it has been observed that a footwear company works very strictly with its suppliers, it supports them when there are problems or complications, and suppliers are always active in giving advices to the company. This process

strengthens collaboration between companies and suppliers, and it allows a continuous amelioration in terms of work and relationship.

A second driver which has helped enterprises to survive to the economic crisis is internationalisation. The year 2012 has been the most difficult year for global trade and global growth: the economic crisis had caused a sharp decline in consumption, an increase of unemployment, and the closure of many enterprises. Nevertheless, the high degree of internationalisation of most enterprises of the district has allowed them to handle the crisis. In 2009, 30% of footwear enterprises did investments but with an increase of unemployment and a decrease of growth, they had to reorganise their production processes: 18% of them outsourced some of the phases of the productive cycle towards oriental European countries – mainly phases in which quality is less consider, for example during the making of the upper part of shoes -; on the other hand, 22% decided to insource from foreign countries to Italy in order to focus production exclusivity on Made in Italy process. The remainder 60% did not modify the structure of their organisations. (Assocalzaturifici, 2017)

A further element that should be considered is the value of trade balance between 2007 and 2017:



As it can be observed in the graphic above, the value of trade balance fell between 2008 and 2009, as the economic crisis began: as a consequence, levels of export decreased vertiginously and in 2010 they start to recover slowly. This graphic shows the capability of footwear enterprises to handle the crisis with internationalisation and export. These elements are still relevant nowadays since the value in 2017 has increased of 1 million euros in comparison with the value in 2007 before the beginning of the crisis. As far as export is concerned, enterprises of the footwear district of the Riviera del Brenta export 90% of their production.

2.2 The Luxury Footwear District of the Riviera del Brenta

The first chapter has described the evolution of production and manufacturing through the centuries, and especially how craftsmanship has changed in response to customers consumer behaviour variations. Before the First Industrial Revolution, every activity was manual, and goods were perfectly personalised to clients' needs. During the XX century, with the introduction of new technologies - such as machineries - which could replace human people -, production increased its levels and enterprises gained from economies of scale. In that period production drifted apart consumption: enterprises wanted to produce in large scale independently from customers' singular needs. The segmentation of the market began just between the two wars, when the economic crisis signed the depression period. Therefore, production and consumption got closer, in order to convince people to buy goods; consequently, enterprises understood that the market could be divided into small homogeneous groups in which people had the same needs, interests, desires, or the same demographic characteristics. Finally, it is at the beginning of the XXI century that production and consumption got as close as in the pre-industrial era: the new modern artisans are called makers and they mix craftsmanship with technological innovation, including passion and high quality as well, in order to create bespoke products for individuals' desires.

This focus about the relationship between production and consumption is crucial to understand the new business models based on bespoke products and on new technological

innovations of the Fourth Industrial Revolution. In particular, the third chapter will deal with a new business model for the footwear industry, in particular the Luxury Footwear District of the Riviera del Brenta. But before immersing in this subject, it is important to know this Italian Footwear District, what are its characteristics, and what are its competitive factors.

2.2.1 History

Veneto is a region situated in the north-east of Italy. The main economic activities have always been agriculture and manufacturing - in particular in the apparel, footwear, eyewear, and furniture industries. Historically, Venetian manufacturing developed through the system of the industrial districts, based on strong relationships of collaboration and cooperation between many small enterprises. This kind of system allowed the region to increase its economic value, because the key of success was due to style, design, sensibility, aestheticism, craftsmanship, creativity, and high quality, which were known all over the world.

One of the most relevant districts of the Veneto region is the Luxury Footwear District of the Riviera del Brenta. Historically, the Venetian footwear tradition is very ancient: it has its origins with the “calegheri”, the venetian cobblers who founded the shoemaker association in 1268. This association was a confraternity which had both a religious and a social function: it was a sort of trade union for the shoemakers. They usually worked in their stalls in Saint Mark Square in Venice, and rapidly they obtained success since the square represented the point of meetings between Europe and Asia. As a consequence, they meet many people, who were curious to know how they created shoes. People went there to take the sizes of their feet in order to make them create bespoke shoes. Nowadays, if we go to Venice, it is still possible to see the symbol of the “calegheri” in the ground of Saint Mark Square: it was there where they put their stalls to sell the shoes. The Venetian cobblers have been able to build a strong reputation based on style, quality and price. (Acrib.it, s.d.)

industrial expansion. Among the people who left Italy in those years, there was Giovanni Luigi Voltan. In the history of the venetian footwear district Giovanni Luigi Voltan is a crucial figure. He was an entrepreneur and a craftsman whose father had founded a footwear enterprise with the same name. At the end of the XIX century he left Italy to move to the United States: he lived in New York, and then in Boston, where the larger footwear industry of the United States was situated. He realised that the American Footwear production was already industrialised: it presented a work division in the production process and a high mechanisation in all the productive phases. There, Voltan was hired in one of the big companies and he had the opportunity to work in many departments, so that he was able to acquire a specialised knowledge in different operations and functions. He also learned how to use specific machineries that could simplify the cobblers' work. After some years of permanence in the United States, in 1898 Giovanni Luigi Voltan decided to return to Italy and bring some machineries for his enterprise. That year signed the beginning of the modern era for the Riviera del Brenta Footwear District.

Voltan obtained a big success thanks to his intuition. The machineries provided him a great competitive advantage towards the traditional Italian footwear producers, which were still tied to a manual craftsmanship. Voltan was able to imitate the American mass production: he mechanised many productive phases which, in turn, allowed him to produce large volumes of shoes and, subsequently, to reduce costs. As a result, in 1904, his company counted more than 500 employees with a production of thousand shoes per day (Roverato, 1996). What is more, during the years between the two world wars, he developed his own sale network, and opened more than 30 stores in the north and centre of Italy, as a consequence, his brand obtained a great knowledge at a national level before, and at an international level after.

Certainly, the other footwear enterprises of the Riviera del Brenta district did react in response to Voltan success and began to imitate the technological innovations brought by him. This is the reason why 1898 signed the beginning of the modern era for the Venetian Footwear District. Besides, Voltan can be considered one of the pioneers of the Italian footwear industry, since he was the first who imported the American Fordist productive model and adapted it to the Italian traditional craftsmanship model, making it compatible with the Italian demand.

The development of the footwear district of the Riviera del Brenta was unstoppable, until the burst of the first world war, which reduced the volumes of production due to two main facts: firstly, men were recruited to fight for the war, so the number of employees decreased; secondly, consumes decreased due to bad economic effects caused by the war. However, successively to the end of the first world war, in 1923 an art and design school for craftsmen and employees was founded with the aim at educating and training veterans and their sons about the cobbler profession: the school signed the beginning of the specialisation of the footwear district. In 2001, the school became the most important Footwear Polytechnique of the world, which still today provides education, development, and research about technological innovations; besides it offers many services for enterprises, such as quality control, rapid prototyping, 3D printers and 3D scanners.

As said in the previous chapter, the years between the two wars were characterised by a heavy economic crisis started in the United States, and by European totalitarian regimes which carried out protectionism politics, restricting international trade. In the district of the Riviera del Brenta, enterprises experienced a depressed period, due to the fact that consumers' demand on shoes diminished, and hides were very difficult to find. However, thanks to the elastic structure of the cluster, enterprises were able to respond efficiently to those negative market variations, producing at low volumes. Besides, many entrepreneurs decided to expand the borders of their markets and began to export their shoes in foreign countries. One of those entrepreneurs was Rino Baldan. His brothers and him founded their own factory in 1948. Rino Baldan was in charge of sales, and for this reason he travelled a lot along Italy, but his desire was to go outside the Italian borders to make people know his brand. Therefore, he went to Great Britain, and then to Germany: there he obtained such a big success that can be demonstrated in the volumes of production: in the first years they produced 200/300 shoes per day, but after the trip in foreign countries they began to produce 1000/1200 shoes per day. (Bondi & Mariacher, 1983)

The boom of the footwear production started in the 1950s, when industrial activities of the Riviera del Brenta grew of 368% (Angeli, 1992). The 1950s were called the years of footwear craftsmanship industrialisation (Fontana, 1998). Most enterprises carried out modernisation strategies, buying innovative machineries which could simplify humans' work without sacrificing quality. However, the increase of the production volume was not due to a growth of enterprises dimensions, since they still resulted to have small and

medium structures; as a consequence, they could not afford the cost advantages coming from economies of scale. This is the reason why most entrepreneurs decided to increase their own exportations mainly selling in Europe, and successively in North America and Asia. In the 1960s and 1970s Germany had become the most important market to export shoes, 55% circa of the sales total: this because German people appreciated accuracy, precision, and high quality of shoes, which represented the Made in Italy essence.

The 1970s are considered the turning point for the Riviera del Brenta enterprises. Many factors occurred and carried out some consequences. Firstly, the oil shock which caused an unexpected increase of the price of energy – the most important source for enterprises, production, transports, and for the daily use of consumption such as warming, light, and cooking. As a consequence, the power of purchasing diminished as well as consumes. Secondly, the decreasing of the power of purchasing of foreign countries caused also the decline of exportations for national enterprises. This fact was very relevant for footwear enterprises since export valued more than 60% of the sales total. Thirdly, competition was becoming more and more dynamic with the appearance of new emergent countries (such as Spain, Est-Europe, India and China). Therefore, in the Riviera del Brenta, companies dealt with a new strategic choice: they had to decide between two roads: on one hand, they could choose a medium-low segment through the mass production, so that they could produce high volumes of shoes in order to exploit economies of scale with low costs and offering shoes at an affordable price; on the other hand, they could choose a high segment, in which they could produce luxurious shoes of high quality, accuracy, and high prices. All enterprises of the district chose the second strategy: they repositioned in a high segment producing high-valued shoes; this alternative confirmed the traditional manufacturing which has always been a success for the Riviera del Brenta district. Positive consequences rose in the short-term: women footwear was positioned in the upper range of the market, and this allowed enterprises to gain a high mark up and to increase the percentage for the export which was around 70% of the total sales. (Angeli, 1992)

2.2.2 The structure of the Footwear District of the Riviera del Brenta

The actual structure of the Riviera del Brenta district had been developed at the end of the XX century. It is possible to create four main groups of enterprises which manage four different strategies:

1. Enterprises specialised in the B2C service. They produce their own brand of shoes and they sell through points of sale which can be single-branding or pluri-branding (e.g. René Caovilla).
2. Enterprises acquired by foreign Maisons. They produce shoes, entrusted by the brands of the Maison, as contractors. They do not sell shoes because brands own their own points of sale (e.g. Rossimoda).
3. Small enterprises which produce on a commission basis and establish relation as subcontractors with bigger shoemakers.
4. Small and traditional enterprises which sell their own shoes through events and fairs (e.g. Gritti – pas de rouge).

The district is also composed of enterprises which produce specialised components of a shoe - for example, heels, soles, accessories, lasts (models of a foot), and boxes. This is the reason why it is easy to find all the materials, even though the bargaining power of clients is very relevant: in fact, enterprises specialised in this kind of components, have a large portfolio of different clients (enterprises which produce shoes), more or less important. As a consequence, important brands own a bigger bargaining power in comparison to smaller brands.

The 1980s have been instable years for the footwear industry, where national and international demand fluctuated. As a response to this decrease, Riviera del Brenta companies decided to outsource some phases of the shoes productive process: in particular, the first phases of cutting out and binding of the upper part of the shoes, which are the least strategic phases in which quality is less considered, in contrast with the phases of lasting (in which the upper part of the shoe is attached to soles and heels) and finishing (the last phase of the productive cycle in which shoes are polished, ironed, and wrapped in the boxes) which have always been “Made in Italy”. The outsourcing had begun for two main reasons: firstly, in order to deal with demand picks; secondly, in order to limit labour costs. Therefore, the main countries in which enterprises decided to

outsource were mainly Est Europe countries such as Romania, Bulgaria and ex-Yugoslavia countries.

The process of international repositioning, started by the Riviera del Brenta enterprises, has brought many consequences for the footwear production: on one hand, they decided to outsource the minor added value phases of the productive cycle; on the other hand, companies have pursued a qualitative improvement through investments on activities such as design, marketing, planning and supply). As a consequence of this change in the business models, enterprises decided to carry out a market upgrading. This means that footwear production moved towards a higher range of prices in order to demonstrate that products belong to a luxury market, but also as a defence from east Asia competitors, which sold their products at lower prices. An additional important consequence is also the fact that high-skilled employees have been attracted by the district, improving Research and Development as well as organisations.

The 1990s were characterised by a competitive pressure which arrived from Spain, Portugal, and Brazil: they produced medium range shoes with low prices in contrast to Riviera del Brenta prices. As a consequence, enterprises enlarged their export market towards United States, Canada, Japan, and Arabic countries, since Made in Italy value is appreciated everywhere, and it justifies the upper prices. The choice of betting on quality has attracted through the decades the attention of the most prestigious brands of the haute couture: owned both by Kering and by LVMH, but also Chanel, Jimmy Choo, Christian Louboutin.

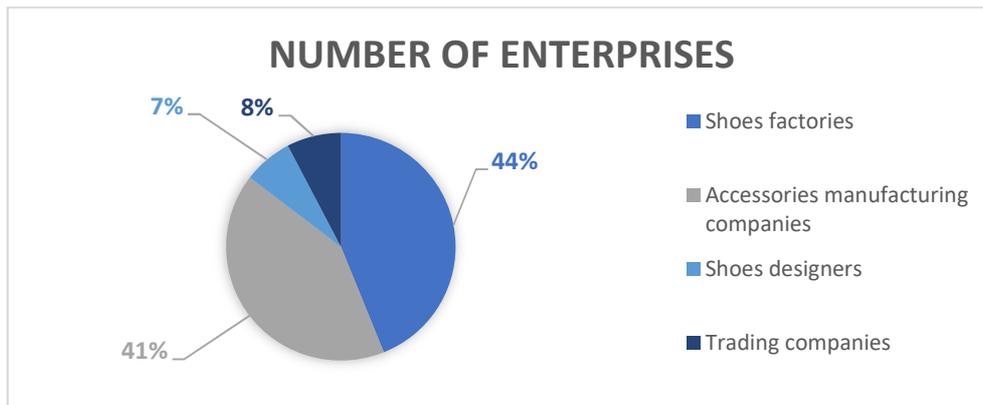
2.2.3 Current data

What about today? The level of export covers the 90% of the total sales. Outsourcing is still a strategic choice for most enterprises, but after the economic crisis the tendency is to produce all the productive phases in Italy. What is more, competition is becoming more and more intense and challenging due to the fact that in the last two decades new actors entered the footwear industry such as China and India. In 2017, the global revenue of the Riviera del Brenta district has overcome 2 billion euros, observing an increase of 3,9% in comparison with the previous year. What is more, it has contributed to 62,1% of the Veneto region total revenue, and 20,7% of the national footwear total revenue. Nowadays the Riviera del Brenta district is composed of 550 enterprises and 10.390 employees, it

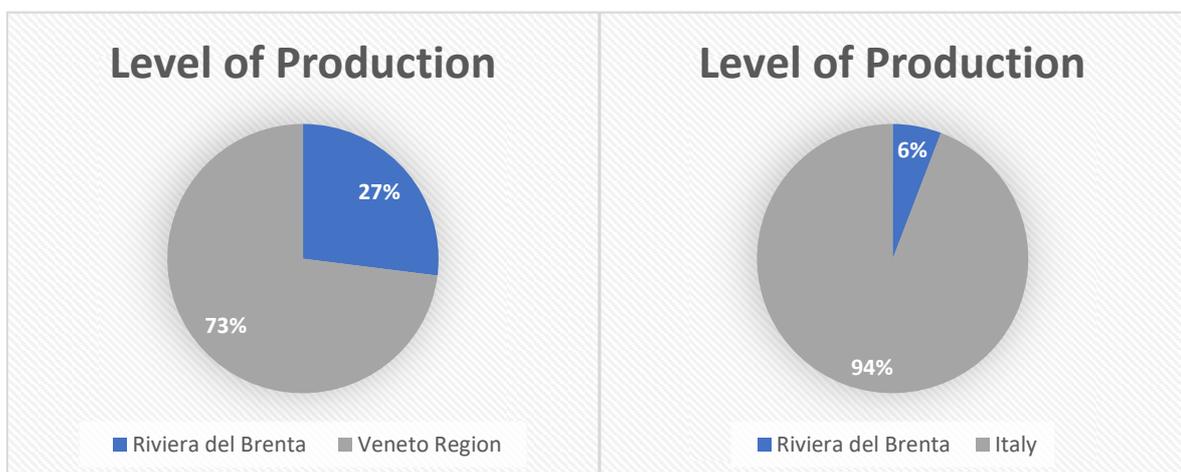
produces 20.121.300 pairs of shoes: 95% of them is women shoes, 5% is men shoes. (Assocalzaturifici, 2017)

In conclusion, some historical data are presented in order to show the evolution of the Riviera del Brenta Footwear District of the last 20 years, in terms of number of enterprises, production, and revenue. In particular, it has been chosen 2001 as the year of the beginning of the XXI century, 2008 as the year of the burst of the world economic crisis, and 2017 as the year of the most updated data.

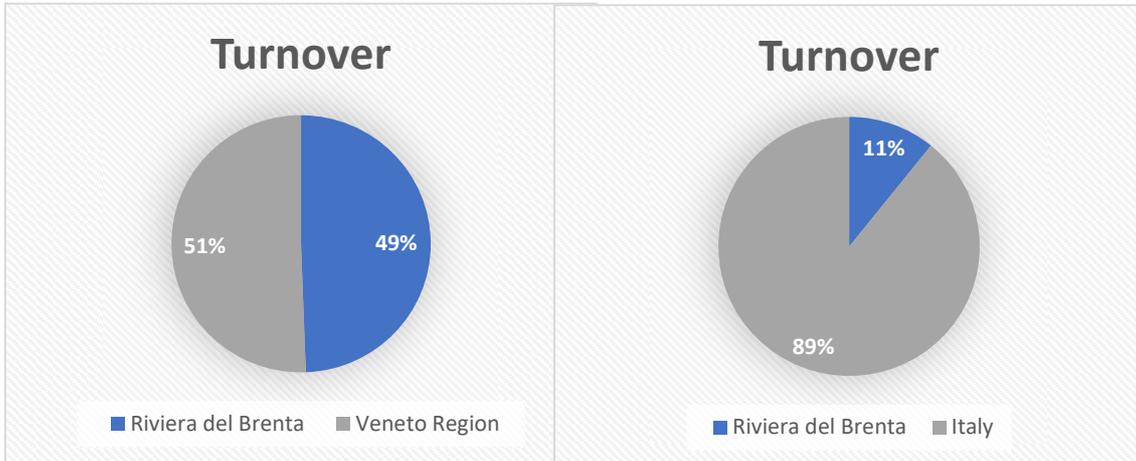
- **2001:** the companies on the Riviera del Brenta represented 63.7% as to the total of shoe-companies in the Veneto Region and 10.3% as to the Italian one. Most of all, they are shoes factories and accessories companies, while shoes designers and trading companies represent a small percentage.



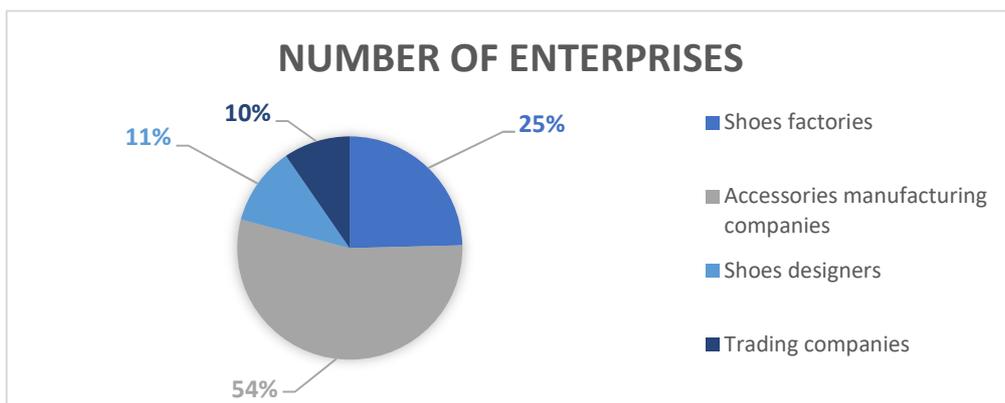
The number of pairs produced in the Riviera del Brenta District represented 27.03% of the total production in the Veneto Region and 5.78% as to the Italian one, which means that the district had a strong relevance for the region economy, as well as for the national economy.



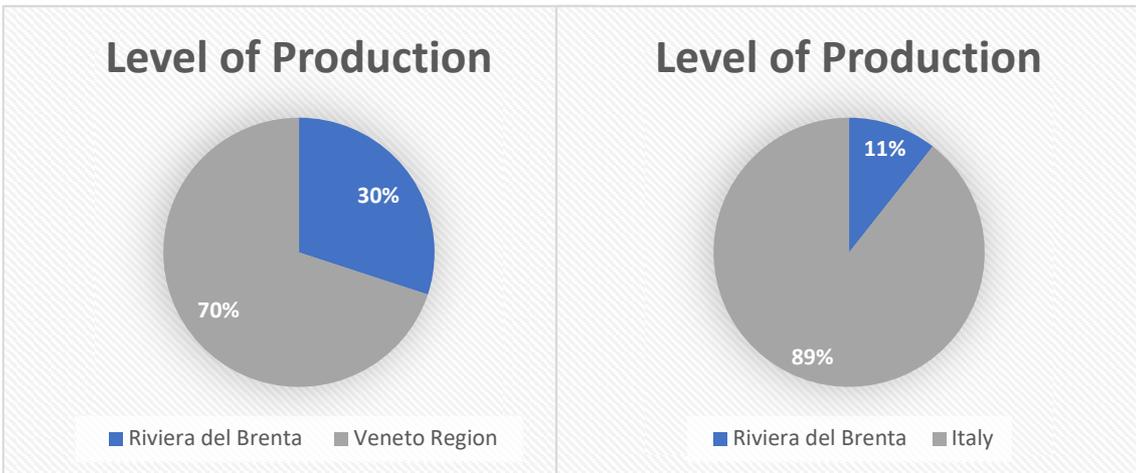
As far as the turnover is concerned, the total value of shoes of the Riviera del Brenta represented 49.4% of the turnover realized in the Veneto Region and 10.8% of the Italian one.



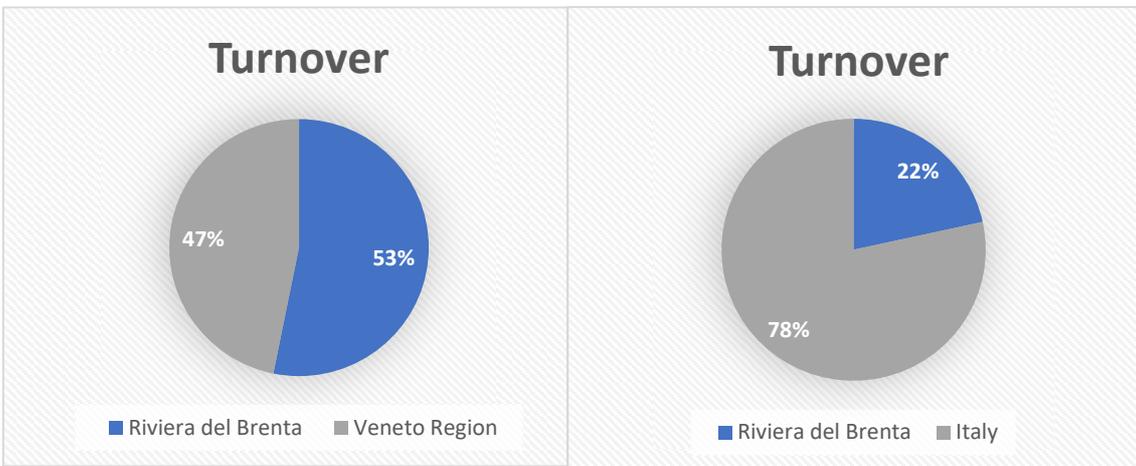
- **2008:** the companies of the Riviera del Brenta represented 75.8% as to the total of shoe-companies in the Veneto Region and 11.9% as to the Italian one. In contrast with the graphic about 2001, it is possible to observe that the economic crisis brought the closure of many shoes factories: the number of companies decreased from 44% to 25%.



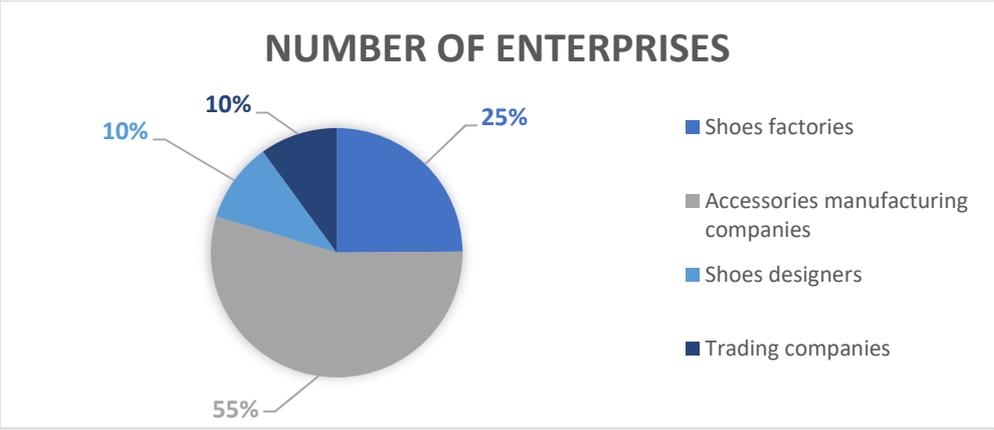
The number of pairs produced in the Riviera del Brenta represented 30.1% of the total production in the Veneto Region and 10.6% as to the Italian one. It is possible to observe a constant increase of relevance of the footwear district in the last 7 years.



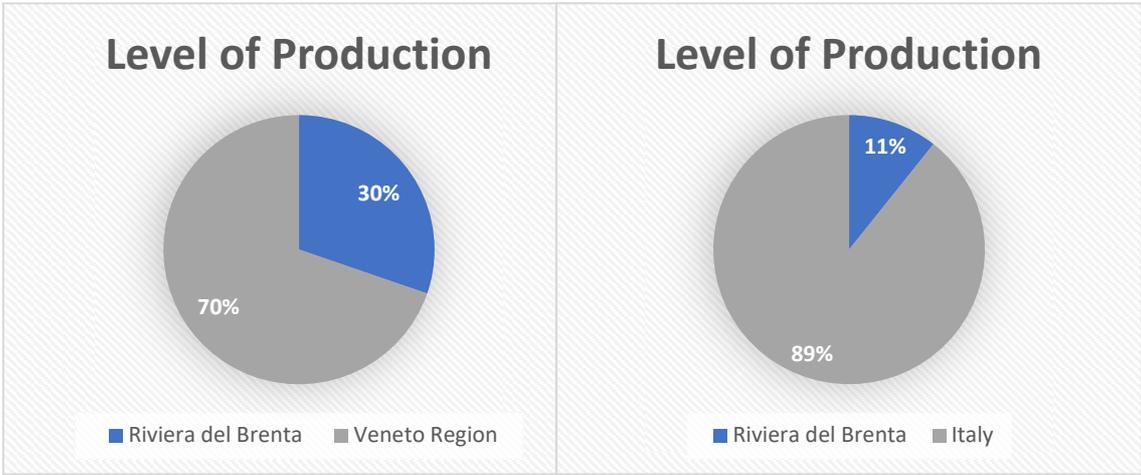
As far as the turnover is concerned, the total value of sales of shoes of the Riviera del Brenta represents 53.2% of the turnover realized in the Veneto Region and 21.6% of the Italian one.



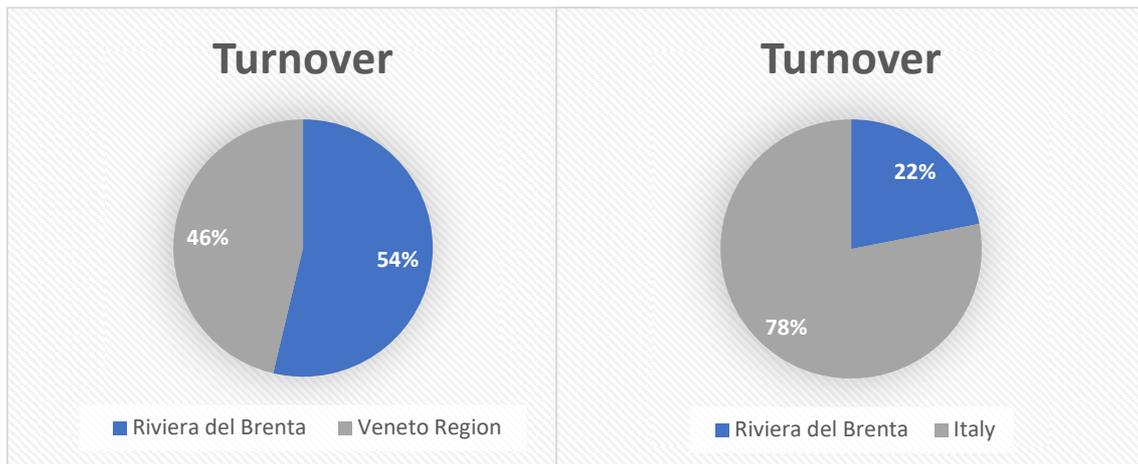
- **2017:** the companies on the Riviera del Brenta represent 76.1% as to the total of footwear companies in the Veneto Region and 12.3% as to the Italian one. The number of companies has increased, even though the percentage of the shoes factories continue to be stable.



The number of pairs produced in the Riviera del Brenta represents 30.3% of the total production in the Veneto Region and 10.7% as to the Italian one. Despite the years of the economic crisis, in which production has decreased its levels, the footwear district has been able to deal with it and not only to regain the levels of the pre-crisis but also to overcome them.



As far as the turnover is concerned, the total value of sales of shoes of the Riviera del Brenta represents 53.7% of the turnover realized in the Veneto Region and 21.9% of the Italian one. Specialisation in high end shoes and internationalizations are the two main strategies followed by the companies in order to deal with the economic crisis.



2.3 Culture and territory: competitive factors

The Riviera del Brenta is the name of the territory in which the Luxury Footwear District was born: it is situated between two cities - Padua and Venice - along the Brenta river. This position was very strategic during the “Calegheri epoque” (from the XVI century to the XVIII century): the river was used as a way of communication and trade which joined Venice to Padua and vice versa through boats. This fact was very crucial for the development of the footwear district. It is said that, during summer, the Venetian aristocrats spent time to their villas along the Riviera del Brenta, and they brought also their personal cobblers. They all reunited and worked together, until they decided to settle there, opening their small studios. From that moment, villages began to enlarge and attract skilled people for the shoes manufacturing, even though the modern footwear district developed at the end of the XIX century when the very first mechanised footwear enterprise opened the doors thanks to Luigi Voltan.

Ancient noble residences can still be visited nowadays: they represent the symbol of the Venetian aristocracy but also the symbol of the footwear district. For example, the Foscari Rossi Villa is now a footwear museum owned by Rossimoda - one of the biggest and most important footwear companies of the Riviera del Brenta district. The villa marks the strong relationship between history, culture, and the shoes. Inside the villa, there is

the exhibition of the most known brands produced by Rossimoda – such as Dior, Louis Vuitton, Yves Saint Laurent, and Fendi.

These Patrician villas were projected by important and very known architects – such as Andrea Palladio - and decorated by famous painters – such as Gianbattista Tiepolo. They have been the residences of kings (the Asburgo family), emperors (Napoleon), and Russian Tsars. What is more, they were attended by poets, writers, musicians, who have been witnesses of the life during the XVI and XVII centuries.

The first paragraph deepened the history of the district with the aim at creating a strong relationship between history, territory, and the production of shoes. In fact, elements such as culture and tradition have always been important competitive factors which have brought the development of the district until its identification both in a national and international way.

As said in the previous paragraph, in the 1990s the footwear enterprises of the Riviera del Brenta decided to change their strategic market positioning towards the luxury level. This important decision was based on the evaluation of the main competitive advantages of the cluster, such as:

- ➔ Uniqueness and high quality
- ➔ Satisfying needs
- ➔ Product differentiation
- ➔ Long tradition and heritage
- ➔ Italian design and Made in Italy identity
- ➔ Qualified and skilled employees
- ➔ Technology innovations

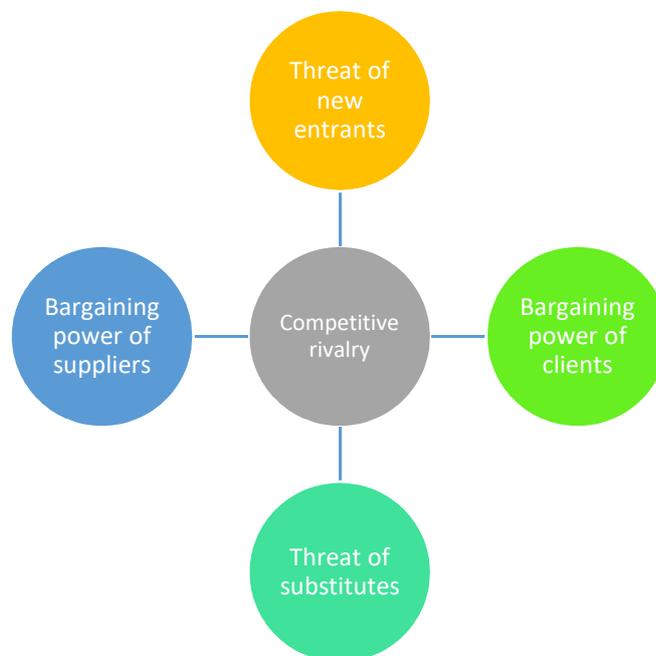
2.4 Competitive Environment

The aim of this paragraph is to study the competitive environment of the Riviera del Brenta district. The study deals with two main methods: Porter's five forces analysis and the Swot Analysis, through which it is possible to analyse both the internal and external

environment of the district, as well as a deep valuation about strengths, weaknesses, opportunities and threats. The third paragraph deals with an export analysis in order to understand why the 90% of the total footwear production is sold in foreign countries.

2.4.1 Porter's five forces analysis

One of the methods used for an analysis of the external environment of an enterprise is the Porter's five forces analysis. In this case this method is used to analyse the external aspects of the district and the role of stakeholders and competitors. The Porter's five forces analysis studies the strengths and the intensities of the following factors:



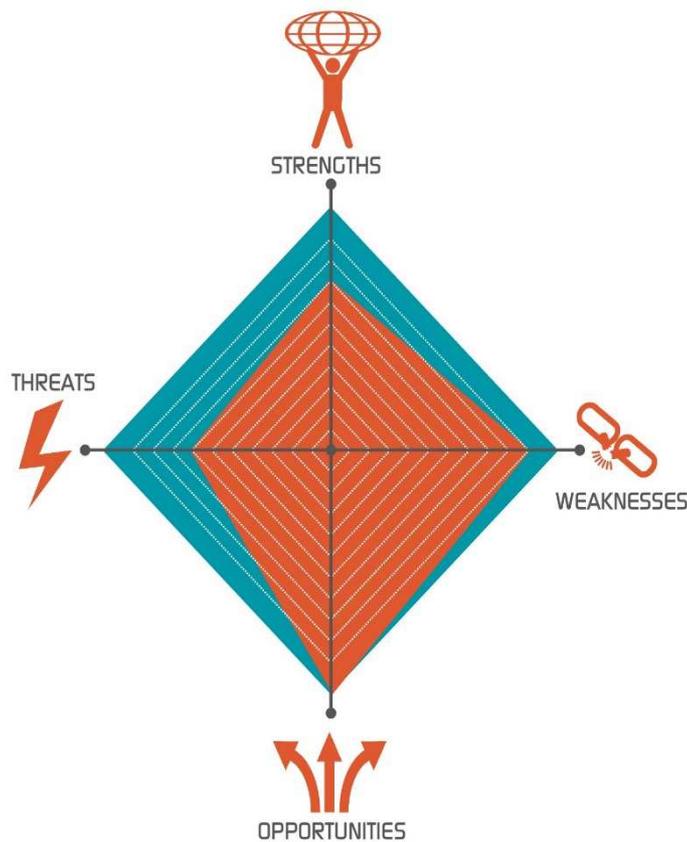
1. Competitive rivalry: it shows how competition influences the industry environment and the performance of individual firms. In the case of the Riviera del Brenta district, the intensity of competition depends on the market growth rate which is low due to the presence of other Italian footwear districts as well as to the presence of Asian competitors; the degree of differentiation in terms of product; and the structure of costs: for example, Asian competitors offer low costs products in comparison with Italian competitors.
2. Bargaining power of customers: it shows how customers determine business competitiveness and the industry environment. In the Riviera del Brenta district,

there are enterprises whose clients are the Maisons, which send the orders of different brands and specify the cancel date of delivering: in this case the bargaining power of clients is very strong. On the other hand, there are enterprises whose clients are the customers: in this case, they own a weak bargaining power due to the fact that footwear prices are high as well as the degree of differentiation of products.

3. Bargaining power of suppliers: it affects the business through the availability of raw materials. In the Riviera del Brenta district, the bargaining power of supplier is weak if some enterprises orders high volumes of materials: as a consequence, suppliers give a lot of importance to big companies. On the other hand, small enterprises which orders low volumes of materials have to deal with a strong bargaining power of suppliers.
4. Threat of substitutes: it identifies the force of substitution on the business and the industry environment. The Riviera del Brenta enterprises offer luxury footwear all over the world: this is the reason why the threat of substitutes is a weak force.
5. Threat of new entrants: it identifies the extent of new entrants' influence on firms in the luxury footwear industry. In the case of the Riviera del Brenta district, this force is weak due to the fact that there are high costs of brand development as well as high entry barriers, which make it difficult for new enterprises to enter this industry.

2.4.2 SWOT analysis

The second method is the SWOT analysis, used to identify and valuate the strengths and the weaknesses of the district on one hand, and the opportunities and threats it handles in its external environment, on the other hand.



Fonte: (European Confederation of the Footwear Industry, 2015)

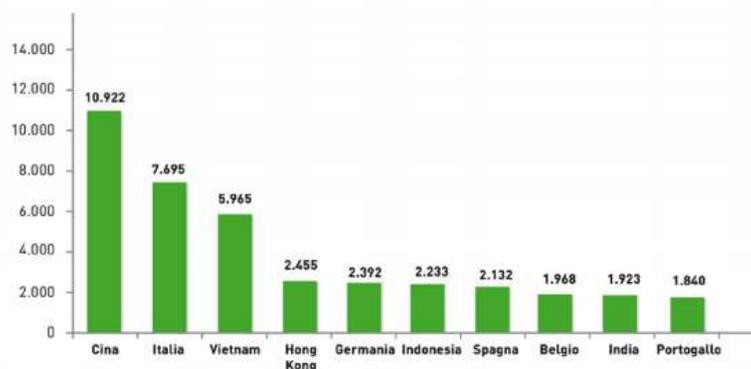
1. Strengths: the Riviera del Brenta footwear district preserves its appeal thanks to tradition and culture heritage which have always characterised the product. What is more, aspects such as design and quality have distinguished Italian manufacturing from the foreign one, also attracting skilled employees in delimited zones such as the Riviera del Brenta district. Finally, in the last years technology has entered companies in order to develop new products in an innovative manner.
2. Weaknesses: generation change. The footwear industry is scarcely attractive for young employees, also considering the progressive ageing of operators. This factor creates particular difficulties for long term strategies of small enterprises. Only making investments on education is possible to reduce this disadvantage.

3. Opportunities: on one hand, the footwear industry can seize the opportunity coming from emerging countries, since 95% of Italian production is exported outside Italy. Most of all, China represents an emerging country in which customers purchasing power is growing, allowing people to buy European products. On the other hand, technology represents another opportunity in terms of products and services. For this reason, enterprises should invest more on Research and Development, in order to respond to a new customers' demand about sustainable products and the certificated origin of materials.
4. Threats: one of the major threats for the footwear industry is the decrease of consumes. Many European countries still have consequences due to the economic crisis of the previous decade. The second major threat is the closure of many countries which have barriers for export activities, preventing enterprises from selling to these countries.

2.4.3 Export Analysis

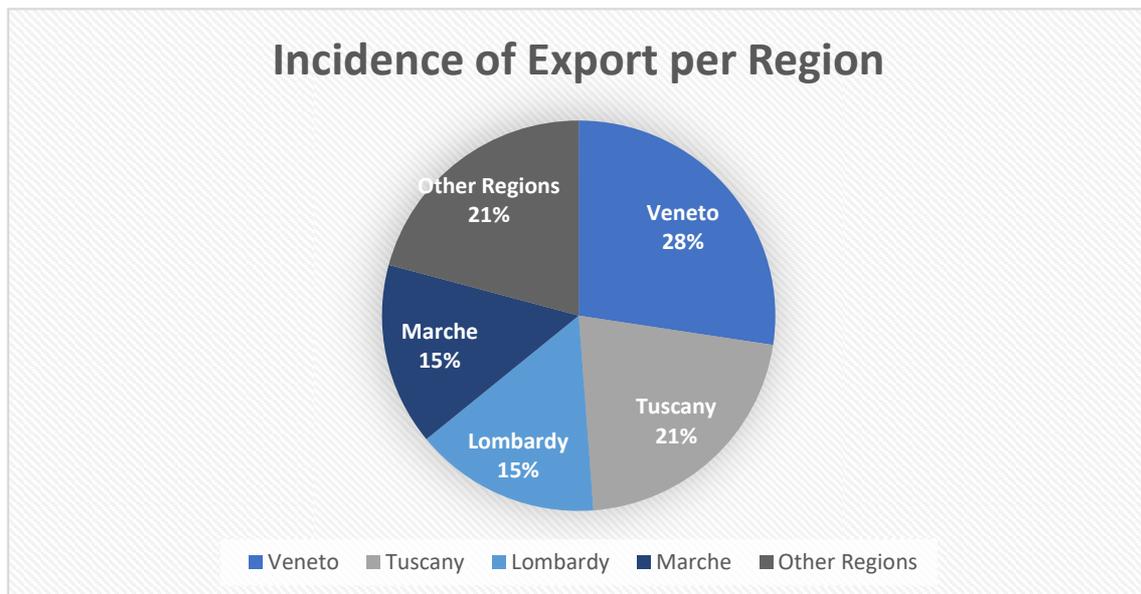
A special in-depth analysis should be done about export in the footwear district. Actually, it is important to underline the fact that enterprises export 90% of their production, and generally, Italy is the second world exporter of leather footwear, behind China and before Vietnam, as we can see in the graphic below.

PRIMI 10 ESPORTATORI MONDIALI ANNO 2015 CALZATURE IN PELLE (HS6403) MILIONI US\$
TOP10 EXPORTERS OF LEATHER FOOTWEAR (HS6403) YEAR 2015 - MILLION USD



Fonte / Source: APICCAPS-World Footwear Yearbook 2016 [www.worldfootwear.com]

In a recent study of Assocalzaurifici - the national association representing industrial shoemakers in Italy – in 2017 national export valued 9.5 billion euros, with an increase of 3.4% in comparison with 2016. On the total export value, Veneto is the first region for export, with an incidence of 27.4%; followed by Tuscany with 21.4%, Lombardy with 15.3%, and Marche with 15.1%, as shown in the graphic below.



What are the main destinations of footwear export?

European Union has always been the main destination of footwear export: France, Germany, United Kingdom, and Spain are the top European countries. What is more, Veneto Region is the first region which exports in the European Union. Other important partners are the United States of America – Tuscany’s main partner -, Russia – Marche’s main partner -, and Middle and Far East – Lombardy’s main partners.

2.5 Institutions

The Riviera del Brenta district can boast to have many enterprises which work for the most important fashion brands, but also it can boast to have founded many institutions,

with the aim at sustaining and promoting enterprises, education, research and development, and the transfer of skills and competences.

2.5.1 Acrib

Acrib is the association of the footwear enterprises of the Riviera del Brenta. It was founded in 1961 in Strà – at the middle of the Riviera del Brenta -, and it represents the footwear industry for Confindustria of Padua, Venice, and Vicenza.

Acrib gathers a system of enterprises of the district, and it offers specialised services in every field in order to respond to enterprises' needs:

- Consultation for new technological innovations;
- Study and realisation of projects;
- Organization of events and conferences;
- Market researches;
- Creation of a technical school: The Footwear Polytechnique.

2.5.2 The Footwear Polytechnique

As said in the previous paragraph, in 1923 an art and design school for craftsmen and employees was founded with the aim at training people about the cobbler profession. In 2001 this school became the Footwear Polytechnique: an educational structure which offers training and technological transfer to the students. It is composed of particular teachers, who come from footwear enterprises and hold the role of shoe designers, stylists, and technicians. This kind of education allows a continuous transfer of craftsman know-how, skills, and competences, in order to generate new classes of cobblers and, consequently, cover the current generational gap. The Polytechnique operates as a partner for enterprises, with the aim at building a strong network of enterprises of the entire productive chain.

What is more, the Polytechnique has also a role of research and development as far as technology and quality control are concerned. Actually, it owns 3D printers and 3D scanners, and there is a room specialised in quality control, in which there are many machineries and instruments which measure the endurance of a shoe in terms of the

quantity of steps, the speed of steps, and also in terms of the temperature of the environment, to measure how much the shoe resist to heat and cold. Besides, recently, the Polytechnique has established an alliance with Inescop, one of the most renowned technological centres of the world, specialised in the footwear industry. The aim is collaborating at the development of innovative processes, through the adoption of technologies, such as 2D and 3D, for the creation of bespoke shoes.

Finally, the Footwear Polytechnique is the unique school of Italy specialised in footwear design, and it can boast many collaborations with the most important fashion design schools of the world, such as the Parsons School of New York, or the IED of Milan. These collaborations allow the Polytechnique, as well as the district, to be known all over the world, on one hand, and allow to attract international students who want to work in the footwear sector, on the other hand.

2.5.3 The Consorzio Maestri Calzaturieri del Brenta

It was founded on 1976 with the aim at promoting export for enterprises of the district. It has two main roles: on one hand, it plays a marketing role since it offers advertising campaigns, and it organises fairs, events and showrooms for buyers and clients all over the world, or international contests in order to increase the visibility of the Luxury Footwear District of the Riviera del Brenta; on the other hand, it has a Research and Development department in which it studies the footwear markets, its statistics, and the consumers and fashion trends, so that it can collaborate with enterprises in order to support and give them important advices, about national and international markets.

2.6 Foreign investments

Craftsmanship and manufacturing know-how, which represent enterprises in the Riviera del Brenta, have attracted many important foreign luxury groups: the two most important are the French LVMH group and the Kering group. The LVMH group gathers important brand such as Louis Vuitton, Dior, Fendi, Bulgari, Givenchy, Céline, Pucci; on the other

hand, the Kering group gathers brands such as Gucci, Bottega Veneta, Saint Laurent, Balenciaga.

These big groups have entered the district searching for specialised producers to whom approach in order to realise shoes for their brands. This trend started at the end of the 1990s, when many enterprises of the district have entertained collaborations with these brands, both national and international, and have begun to work as subcontractors. However, the unique enterprise which has had the opportunity to enter the LVMH group is Rossimoda.

Rossimoda had already started numerous collaborations with the most famous national and international brands – such as Dior, Yves Saint Laurent, Marc Jacobs, Givenchy, Fendi – and it gained such a big visibility to other brands that the French Maison LVMH decided to buy it and include it under its roof for the footwear production, conferring four brands: Givenchy, Céline, Nicholas Kirkwood, and Emilio Pucci.

LVMH is a world leader in luxury, with a unique portfolio of prestigious brands. It marks a personal and collective commitment to a quest for excellence to build the future of tradition. All the companies that LVMH gathers are synonymous with luxury in their respective sectors, driving leadership and financial performance. Tradition figures at the heart of the heritage, it is synonymous with ancestral know how and the skilled work of generations of creative talents and artisans. LVMH holds is the leader of the fashion high-end world: in 2017 it has gained 42,6 billion euros of turnover. The excellent performance of the LVMH group reflects the strength of its brands and the appeal of their products. Companies cultivate values that define their identity, and their differentiation.

Other brands of the Maison, such as Louis Vuitton and Dior, have decided to open their own factories in the district area, because they knew that the footwear district attracted skilled and professional people to hire. The geographical area of the footwear district facilitates an interactive learning and the building of strong relationships with companies and suppliers, so that exchange of knowledges results easier.

In the last chapter, the argument will be recalled and deepened, especially focusing on Rossimoda and other big enterprises of the district, in order to understand how they take advantage of technology innovations and how they use them within the product development phase and the productive cycle.

Chapter 3

3.1 District 4.0

The last decade has been characterised by the diffusion of a new term in business concept: Industry 4.0 – also called the Fourth Industrial Revolution. As already mentioned in the first chapter, when a revolution occurs, old business models are replaced by new ones since new technological innovations initially destroy and then improve them. These technologies are called disruptive technologies because they radically change old businesses.

As for the previous industrial revolutions, even the fourth one is characterised by the introduction of new elements which allow to recognise this revolution. These elements are mainly artificial intelligence, virtual reality, 3D printing, internet of things, and robots; and they have changed on one hand, the way companies do their business, on the other hand, consumers habits in their everyday routine.

Artificial intelligence is able to create systems that can function intelligently: it works and reacts as a human being. Actually, Artificial Intelligence is able to collect data, recognise objects and people, classify different things, and it can also predict events.

Virtual reality is a technology which combine virtual things to a real environment with the use of devices with displays such as glasses, or smartphones. With the use of virtual reality, a person can immerse in a new setting and he can move, watch, and even modify it.

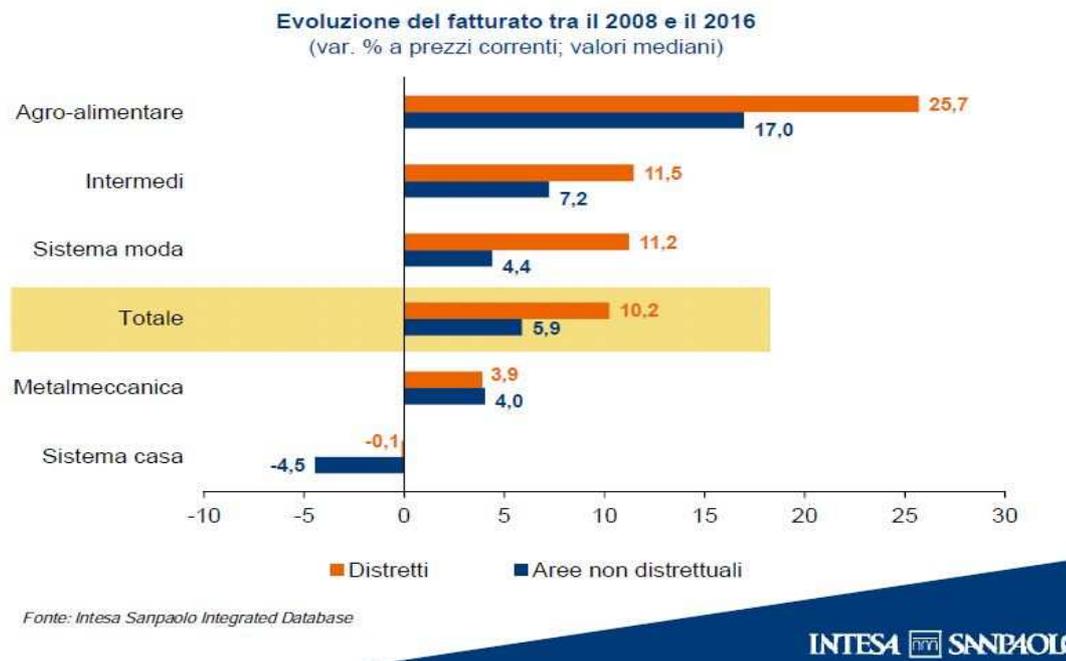
3D printing is a revolution first of all for manufacturing. Thanks to the use of CAD (computer aided design), a technician can virtually design an object in the computer and then it sends the input to the 3D printer which transmits the design into a real object. With this technology, every material can be used, every shape can be printed, even though the duration can be very long, and it can take even more than 24 hours for a small object.

Internet of things is the extension of internet in objects and places. It allows objects to communicate through the insert of sophisticated sensors and chips which collect thousands of data and information in order to better understand how they work together.

The Fourth Industrial Revolution has occurred inside industrial districts as well, with excellent results in terms of turnover, productivity, and EBITDA margin, in contrast with enterprises which do not belong to a district.

An example can be observed in the graphic below which shows the differences of turnover between districts and non-districts.

Distretti industriali: crescita superiore alla media ...



The reasons why districts have a better performance are several, but one of them is that districts have introduced some technology innovations of the industry 4.0. They have become more technological in order to respond to a new consumer demand which wants to buy personalised goods and interconnected objects.

In next paragraphs, the district 4.0 will be deepened in order to analyse a brand-new business model which depends on the most recent technology innovations – such as 3D scanner, 3D printer, laser cutting, and RFID tag.

3.2 A Brand-New Business Model: The Bespoke World

As the first and the second chapters have described the global environment around the Luxury Footwear District of the Riviera del Brenta, now it is time to focus on the specific environment inside enterprises. Particularly, this chapter will consider the impact of digital technologies on business models and on strategic choices, structured by most enterprises. Actually, the evolution of technologies has brought enterprises to rethink their business models, since traditional ones do not accommodate the Z Generation and the Millennials – the youngest generations, which will represent the 45% of the market by 2025 – according to the latest (Bain & Co, 2018) study released in collaboration with the Fondazione Altagamma.

In Italy, there is an association for footwear enterprises which is called Assocalzaturifici: its aim is to support, protect and promote the interests of the Italian footwear industry. It is a national association which represents the industrial shoemakers. The footwear sector, as a whole, totals over than 14 billion euros in annual sales, employs 77,000 people, and exports 85% of its production.

According to the latest surveys of Assocalzaturifici, the footwear industry is characterised by a stable and constant climate: in 2017, production increased on average 0.7% in volume and 2.1% in value. Annarita Pilotti, president of Assocalzaturifici, declared: “We are approaching the close of the year which has, after a long and unsatisfying period, finally started to show some tentative signs of a turn in the cycle”. She also added that data are comforting, and, actually, they show that exports grew of 1.4% in volume, as compared to the same period in 2016. However, two main factors are the causes of the braking of economic growth: the first factor is the far east big competitors – China, India -; the second factor is the weak relationship between enterprises and technology innovations.

3.2.1 Far east big competitors

In the last years, market dynamics have been subjected by transformations both in a strategic and structural point of view, which, consequently, have modified the modalities with which competition among enterprises conducts.

Can you name a sector where China or India are not in the list of competitors? It is hard. Because we can think about every industry - such as electronics, information technology, automotive, and also apparel and footwear -: it is certain that China and India will be always threatening competitors for European enterprises.

China and India count together 2.8 billion of inhabitants, and most of them are young people. In part, the two countries present the same characteristics: they possess scientific knowledge, technological skills and business capacities; although many people still live in poor and marginalised conditions.

India's success started in the last decade of the XX century: many economic reforms redesigned the structure of the country, and in less than 10 years its GDP grew from 320,000 billion dollars to 806,000 billion dollars.

China's success started at the end of the XX century, as well. For more than 20 years, Chinese economy grew at an average annual rate of 9.6%, thanks to the "open door" policy. It concerned an economic liberalisation, rights to private enterprises, and protection by the State itself. On the other hand, foreign countries were attracted by this new policy, most of all by the low costs of salaries, and began to establish new relationships with Chinese enterprises. Another important aspect about China is its consumers. An annual survey carried out by The Boston Consulting Group, in collaboration with Altagamma, has studied the True-Luxury Global Consumer. The survey analyses the luxury market and the kind of consumers who nourish the economic growth. (Bain & Co, 2018). Particular attention is put to Chinese consumers, who present the following characteristics:

1. Luxury values during the process of purchasing: Chinese prefer traditional values, such as quality of materials and exclusivity of products, together with identity statement. When a brand does not reflect their identity anymore, then they search for another brand.
2. Made in: Chinese have difficulties in recognising if a brand is Italian or French. However, products Made in Europe are always preferred in contrast with Made in America products.
3. Social media and word of mouth are the first and the second source of information. Chinese prefer to be informed by the brands, they communicate

through smartphones and applications, and then they watch reviews by influencers.

4. Finally, Chinese are multichannel. They buy both online – through smartphones or tablets - and offline in mono-brand stores. What is more, Chinese is one of the populations which mainly purchases in foreign countries.

What about the footwear industry in China and India? If we observe the graphic of the second chapter, which deals export, we can see that Italy is the second world exporter of leather footwear, behind China and before Vietnam, while India is in the ninth position. What is more, The China Leather Industry Association revealed that, last year, footwear manufacturers generated sales over 120 billion US dollars, with an increase of 4.4% as compared to 2016. On the other hand, India is specialised in fabric manufacturing and embroidery for footwear.

3.2.2 Business and technology

The second factor which brake the economic growth of the footwear industry was the weak relationship between enterprises and technological innovations. Working in one of the most important enterprises of the Riviera del Brenta district, I could observe that the level of technological instruments used in daily routine is still very low.

Most enterprises still rely on traditional business models, according to which technology supports handmade activities, but still plays in the background. This means that, for example, during the prototype phase, stylists design the shoe model by hand, then CAD technicians redesign the model through CAD program in order to suit the 2D model into a 3D model; one more time they design the 3D model by hand in a last. As it could be observed, handmade work has an important role, while technology has an inferior one.

Deepening the reason why technology is not combined with handmade production, it is perceived the fear that technology can overpower craftsmanship, bringing an industrial, standardised and impersonalised production in which quality is less considered. This because one of the competitive advantages, seen in the last chapter, is a craftsmanship production, through which designers embrace their passion and creativity, creating goods which would speak if they could.

However, there is also a little percentage of enterprises which have learned to combine technology with craftsmanship, without sacrificing quality, creativity, and style. For example, using the laser cutting machine which can precisely cut the leather, saving time and costs; or using the 3D printer with which it is possible to create new shapes of accessories and heels in order to make prototypes at low costs.

Finally, since footwear companies are facing problems of becoming outdated and lacking design innovation, the aim of the chapter is to evaluate many kinds of innovative production techniques which can be combined to craftsmanship in order to stay competitive, and to study their impact on the business model of footwear enterprises, so that they can create bespoke and personalised shoes.

3.3 Digital Manufacturing

Nowadays, manufacturing is more and more characterised by the presence of Information Technology, which allows, on one hand, machineries to be connected with people, on the other hand, different processes to get closer and integrated.

As described in the first chapter, economic history can be imagined as a cyclical process: in the beginning there is the ordinary economy in which enterprises and people live and adapt themselves to the existent technology, then an industrial revolution occurs, and it brings new innovations, new scientific knowledge, and new technologies. These novelties provoke a shock for enterprises and people, because they realise that the ancient strategies cannot be executed anymore, since the economic environment has changed. As a consequence, fear, uncertainty, and hesitation towards innovation are substituted by curiosity, adaptation, and engagement. Finally, enterprises and people discover that these novelties have positive effects for their business, until next shock. This shock is also called “Disruptive Technology” and it is caused by innovations.

3.3.1 What is Innovation

Schumpeter was the first scholar who has analysed the concept of innovation as a central entrepreneurial activity. In his vision, the entrepreneur is an innovator, who owns capacities, intuition and creativity, and identifies new potentials in technologies for the amelioration of productive process and products. Through innovation, enterprises are able to reach a temporary monopoly: as a consequence, they can gain extra-profits until other enterprises spread and imitate this innovation (Tunisini, Pencarelli, & Ferrucci, 2014).

According to Schumpeter innovation is a process of “Creative Destruction”. Who innovates, makes current offerings obsolete: in this process many enterprises are not able to respond and take advantage of innovation, thus they can disappear (destruction); on the other hand, with the same innovation other enterprises can rise and be more efficient (Creation).

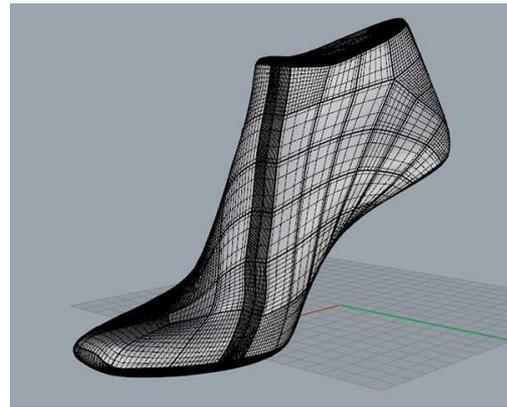
Technology has reached important levels, entering every sector and modifying the way enterprises do business. It has opened new and different possibilities to do business and to experiment, with an approach called “do-it-yourself”. Many work processes have discovered craftsmanship through the use of new technologies, such as 3D printers, which tie man creativity and man ingenuity. As a consequence, the figure of a new digital and craftsman entrepreneur is taking shape in an international environment.

New digital instruments create new business models, and the following list describes these instruments and their feasibility in a footwear company. The list is divided into technological instruments for product development and production processes on one hand, and technological instruments for promotion and sale, on the other.

3.3.2 3D Scanner

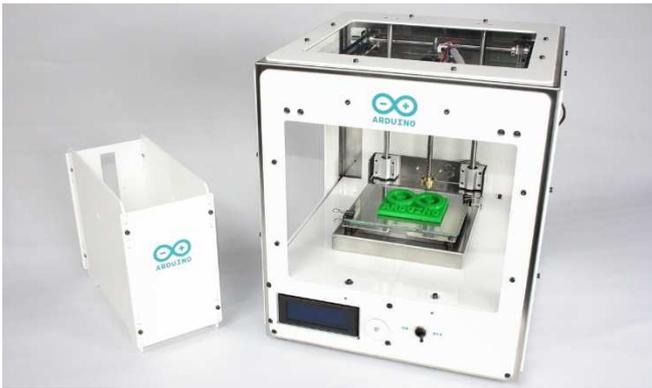
The 3D Scanner is a recent innovation technology, which is able to acquire the shape of an object and obtain the three-dimensional copy in a computer. This machine can be used by a footwear enterprise which wants to create bespoke shoes for a specific customer. The footwear scanner is a closed box, with many laser cameras which measure the coordinates of thousands points of a foot and transmit the shape of the foot in a computer. This shape becomes the last – the anatomical shape of a foot – on which the technicians design the model of a shoe. Its use is worldwide since enterprises can allocate the

footwear scanner in their sale points so that people coming from different countries can use it, and transmit information to the producer, who can create bespoke shoes according to customer's desires. Actually, a digital configurator allows the customer to choose from a huge variety of materials, colours, soles, and heels. When the customer decides his shoes, the model is sent to the manufacturer, who realises it by hands. This kind of technology allows to obtain a first digital look of the model, which can be modified and approved, preventing from the physic production of numerous prototypes.

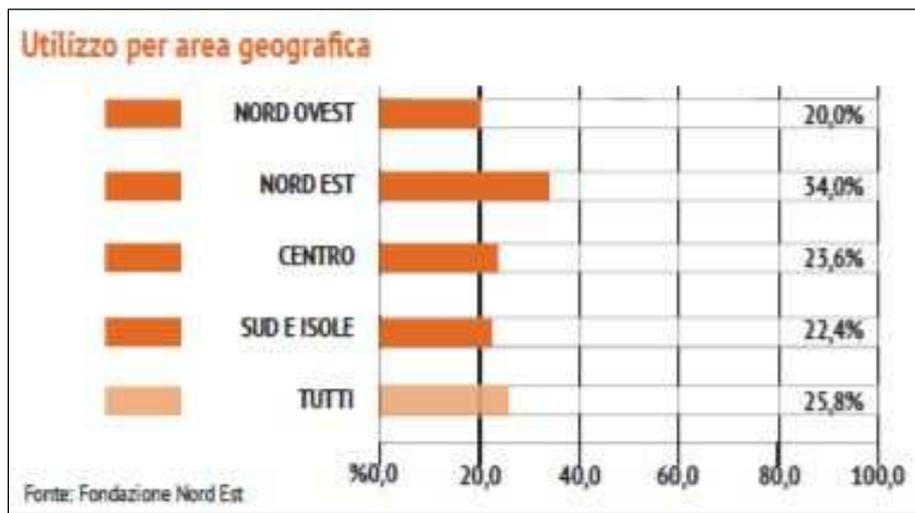


3.3.3 3D Printer

The invention of the 3D Printer signed the beginning of the Fourth Industrial Revolution at the beginning of the XXI century. This instrument is able to print every kind of product, simple or complex, with every kind of material. This is the reason why, footwear enterprises, or even better accessories enterprises, have the possibility to use this instrument in order to produce buckles, zips, accessories, or heels and soles. What is more, 3D printers can be integrated with the use of CAD software (Computer Aided Design), with the possibility of reproducing the image in different computers or different printers. The biggest limitation of the 3D printer is the fact that it takes many hours, or even days, in printing an object, as a consequence, for the moment, it is not possible to realise high volumes, yet. However, an enterprise can obtain an incredible competitive advantage if it uses the combination between 3D scanner and 3D printer. As said in the previous paragraph, the 3D scanner is able to obtain the shape of a foot and transmit to the computer as a last, consequently, the last can be printed by the 3D printer in order to maintain a high level of customisation and realise bespoke shoes.



According to a research from Fondazione Nord Est, 25% of analysed enterprises use 3D scanners and 3D printers “in house” or supported by an external service; what is more, in a geographical point of view, the percentage of enterprises which use these technologies reaches 34%.

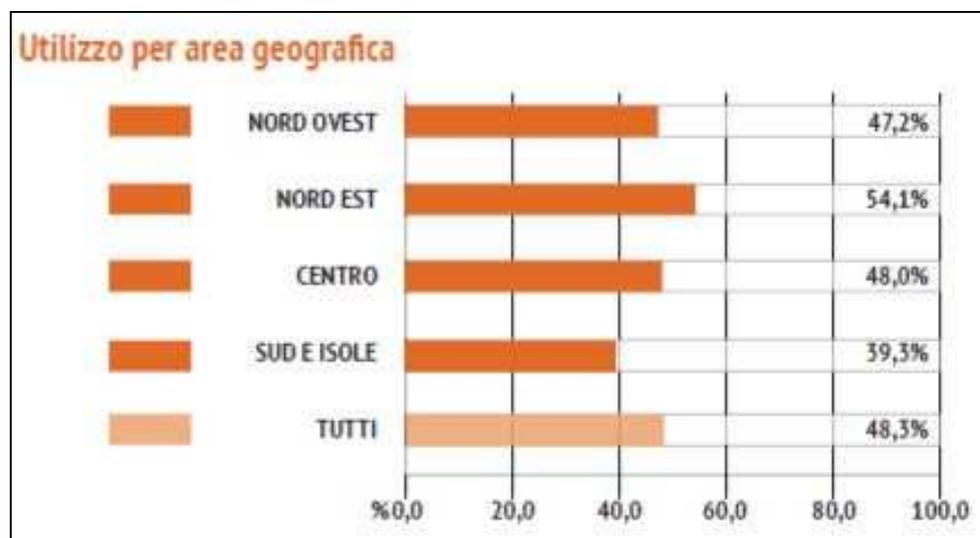


3.3.4 Laser cutting Technology

The Laser Cutting is a technology which uses the precision of a laser to cut different materials. This technology works through the input of a computer numerical control (CNC), which communicates the information taken from the technical data sheet – which is drafted by the engineering department – about the model of shoes, the materials, and the shapes of what must be cut. In a footwear enterprise, precision starts from the cut of

leathers which goes to create the upper part of shoes. In particular, when technicians ultimate the design of a model on CAD, they send the model to the person responsible to the cut of leathers. The information is received by the laser cutting machine which starts to cut following the shape of the CAD design. This technology allows the process to be precise, speed, and to reduce wastes of leather.

According to the research of Fondazione Nord Est, 50% of analysed enterprises uses Laser cutting machines and 76% of them uses the computer numerical control. From a geographical point of view, for Nord Est enterprises these percentages reach respectively 54% for laser cutting machines and 78% for CNC.



3.3.5 RFID TAG Technology

The RFID TAG Technology is a system which is able to transmit via radio information about the identity of a product or a material. It is a little electronic component of few millimetres, in which data are stored, and then transmitted to many devices, such as a computer, a tablet, or even a smartphone. As far as the footwear industry is concerned, there are many ways to use this technology. For example, during a fashion show, people can obtain information about the model of shoes, such as the origin of materials which compose the shoes, or the production phases which have been taken for the realisation of shoes, all this through the use of a device. Another example on the use of the RFID TAG

technology is in sale points: an interactive shelf can be installed in stores, and when a customer position the shoe on the shelf, he can obtain information about the materials used for the realisation of the product, the provenience of materials, the processes of production, or even images about fashion shows, and advices about how to wear that model of shoes. This system allows the customer to touch with his hand the shoes – having a real and physical perception – and to offer information which enriches the experience. Living this experience, customers are involved and entertained, and they are more inclined to proceed to the purchase. Information becomes entertainment, so that customers receive and store them in a stronger and enduring way. It is an opportunity for creating a dialogue with the customer and transmit emotions, feelings, and unique experiences.

Another way to use the RFID TAG technology is installing an interactive shelf, in a showroom or during a fair, on which there is the collection of shoes: the technology counts the number of times this model has been observed and wore by a customer and how long, in order to obtain statistics about the models which have created a major success.

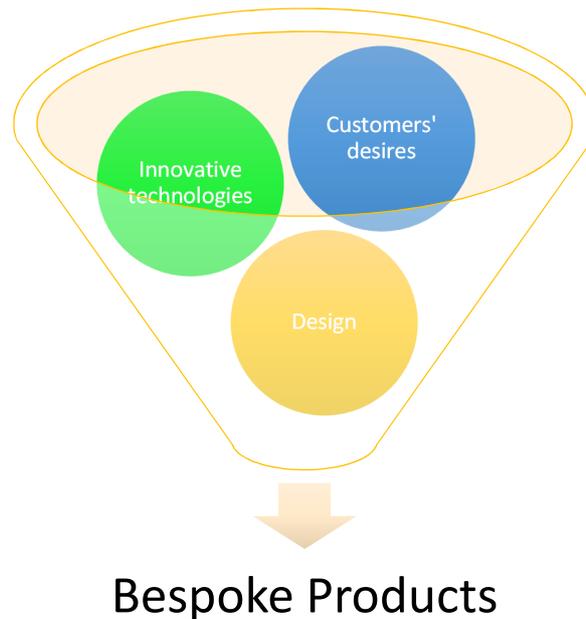
To support and allow an immediate personalisation for customers, sales force can use some technological devices – such as tablets or interactive tables – in which they can show to customers the collection of shoes. Customers can choose from a huge variety of models which can be personalised following their desires: for example, they can choose from a variety of materials – leathers, fabric, refined materials -, they can add accessories – the colour of buckles, the quantity, the position -, and they can even choose the height of heels. This kind of digital configuration of shoes allows customers to observe all the possible options for personalisation of bespoke shoes.

3.4 A new Business Model

The previous chapters have described two important aspects of the thesis: firstly, the footwear industry, in particular the Luxury Footwear District of the Riviera del Brenta; secondly, the most recent innovative technologies that are entering the business. Now, we

have arrived at the heart of the thesis, in which all the different elements previously presented are going to be mixed in order to create a homogeneous result.

We may imagine a funnel, through which the elements pass: customers' desires (who), innovative technologies (how), and design (what). The mix of these ingredients has as a result a bespoke product.



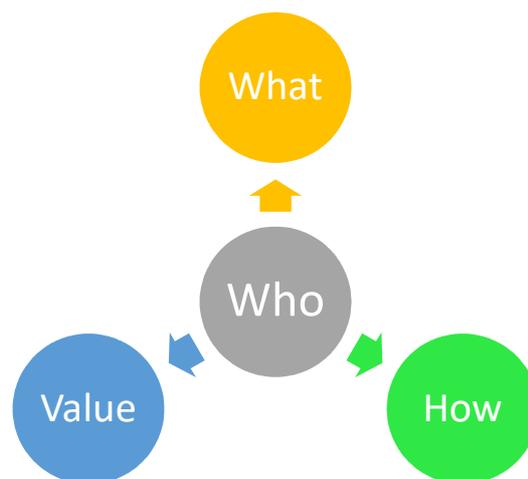
Two questions may arise at this point: why do enterprises have to reevaluate their business model? And, how can enterprises adapt their business model in a modern vision?

Some successful companies have failed despite the fact that they possessed R&D resources, top employees, and a deep knowledge of their markets, just because they have not been able to rethink and innovate their business models. These companies were so blinded by their success they did not notice that their environments had changed. It is important to know that innovation runs very fast, and enterprises have to keep its pace and gather all competitive advantages that can be arisen: for example, innovation can increase the customer value of a product, or it can reduce the costs of production. Certainly, by applying technology in business models, companies need specific competencies, dynamic capabilities, and appropriate resources. It is not easy to take a technology and adapt it to the business model, however companies can also imitate other

business models in order to understand if it is the right path. In fact, the success of a business model comes from the ability of a company to create value for its customers, satisfying their particular desires, or solving their problems.

“A Business Model includes all aspects of a company’s approach to developing a profitable offering and delivering it to its target customers” – this is the conceptual definition of business model given by the MIT Sloan Management Review. Therefore, the aim of the business model is to create value in order to gain profits: along the path an enterprise has to be able to use the most innovative and the less expensive means in order to reach this objective.

To answer the second question, companies have to be aware of their current business models and try to imagine new different possibilities that can be integrated to the new ones. A business model has to answer to four questions, as presented in the graphic below:



3.4.1 Who is the target customer

When a company defines its business model, the first question is: who is the target customer? Who does it sell its offering to? In order to answer these questions, the company identifies the potential market, then it proceeds to divide it into different but homogeneous small groups – the segments – and finally it chooses one, some, or all them. The aim of the company is to understand the needs of customers who compose the

segment, and the first step is “putting itself in the customers’ shoes”: in this way, the company tries to behave like its customers, in order to analyse and interpret what their problems and needs are. This is the reason why “forward-looking companies are turning customer insight into a source of competitive advantage” – as the Centre of Customer Insight of BCG declares. Actually, the role of a customer insight is not only a simple research on customers’ habits and behaviours, but it is also a deep analysis on needs and desires which existent products have not satisfied yet.

The current panorama of customers is evolving: technologies are modifying the way customers think, search, purchase, - and generally – live. In a recent survey on consumer behaviour, it has emerged that customers have begun to recognise and appreciate sophisticated products, because the general feeling is the uniqueness. People do not search for mass goods anymore, because they want to buy goods which represent them, their personality, and their style. What is more, even the way they search for information about a product has changed: they prefer to listen to family and friends’ advices and then they use technological devices to compare goods and prices in different sites and buy them online. Certainly, the millennials are the most representative sample of this new consumer behaviour.

Why do millennials have such a deep importance for enterprises? Millennials are people who were born between the 1980s and the end of the 1990s. This generation was born during the internet era, when the use of communications, media, and digital technologies rapidly increased. The main characteristics of millennials’ consumer behaviour are the following:

- they want to live a remarkable experience when they purchase;
- they search for information through family and friends’ advices;
- they are hyperconnected;
- when they buy something online, they want to receive it immediately.
- Another relevant aspect is the fact that millennials have particular and individual desires, and they want to be different from the others: this is the reason why they search for personalised goods which make them unique.

As far as Riviera del Brenta enterprises are concerned, the target customer is represented by the medium-upper class of women, from 25 to 60 years old, because, as said in the previous chapters, the District is specialised in women luxury footwear. Women desire to

buy a unique pair of shoes made of high-quality materials, an Italian manufacture, a refined design and style, and customisation. On one hand, they want to be engaged and involved during the product development, so that the shoes can reflect their style and satisfy their needs; on the other hand, they want to live a memorable experience while purchasing online as well as offline.

How can a company take into account all these characteristics for its customer target? The answer can be found in the next paragraphs.

3.3.2 What is the offering

The offering is also called value proposition, because it refers to the totality of products or services which represent a value for a specific segment of customers. The offering is the result of deep surveys about customers, in order to have a good knowledge of their needs and desires.

Once a company has identified its target customer, needs and desires, it has to find a response – that means a good or a service – which is able to satisfy the customers.

Certainly, for a footwear company the offering is represented by the shoes, but the answer is not completely taken for granted. Actually, footwear companies will not have any problems about a decreasing demand, since shoes have become a primary need; however, precisely because of this reason, companies have to reinvent the products and the services tied to them.

How can a footwear company reinvent its products? By proceeding through a product innovation. Writing the definition of the OSLO manual drawn up by OECD (Organisation for Economic Cooperation and Development), “a product innovation is a new or improved good or service that differs significantly from the firm’s previous goods or services and that has been introduced on the market”.

Principally, in a footwear enterprise, product innovation operates in two phases: product development and engineering. The product development phase is a crucial phase on which design, style and luxury depend, for the brand success. It starts from a design of a model of shoes which a fashion designer and its team have created, then it concerns the research and the study of materials and components for its realisation. Innovation plays a relevant role in this phase because for each model of shoes, developers can find different types of

leather, or different ways to colour and treat the leathers; what is more, new accessories of different shapes and materials can be developed, or new applications on leather, for example strass and embroideries. Sometimes, developers demand to buy the crust, which is a hide in a raw state that can be treated in numerous manners in order to create tens new solutions. Innovation can also regard the creation of new lasts (they are the shape of a foot on which the model is build), or heels of different shapes and heights. As a consequence, each new material, or technic, has to be controlled in order to valuate if it can be produced, and this is the reason why the product development department works strictly with the engineering department, which concerns the study of the feasibility of the product from a technic and productive point of view.

As a result, shoes are not only an object for being comfortable in walking, but also a design object, behind it there is a long and deep study of new technics and styles. This mutation comes from the change of women thoughts: they do not need shoes anymore, because they desire them as an important accessory which represent themselves. They think that it is obvious that shoes must be comfortable, but they also want them to be particular and individual.

3.3.3 How is value proposition created

Technological change is often considered one of the engines that drives the search for new and better ways to satisfy customers' requirements. What is more, digitalisation on manufacturing processes creates benefits on competitiveness due to the possibility of increasing the level of customisation of products. Besides, on one hand, it allows to grow the level of quality, on the other hand, to diminish production costs.

As it can be observed in the previous paragraph, using innovation during the phase of development of the product brings to the realisation of brand-new products, in terms of materials, accessories, and shapes. However, what are the instruments that allow this product innovation?

In the footwear industry, enterprises can own many instruments that not only simplify product development, but also make it precise, rapid, and efficient. These instruments allow another type of innovation: the process innovation. Always referring to the OSLO manual drawn up by OECD, "a business process innovation is a new or improved business

process that differs significantly from the firm's previous business processes and that has been brought into use by the firm".

As far as product development is concerned, the application of new programs such as CAD and CAM represents a process innovation. With the CAD (computer-aided design) system, technicians work directly on computer: they start using the 3D scanner which transmits the shape of the last in the computer, then they trace the 2D design of the model of shoes given by the fashion designer on the 3D design. In this way, the process becomes speedier and more precise because the CAD system calculates the margin of error and corrects it. What is more, it is always possible to modify the design, or change the shape of the last, as long as the fashion designer is satisfied.

A second process innovation refers to the production process. Production is very different from product development: the latter is a long process because every model of shoes has to be tested and worn many times before it gets the approbation from engineering team; on the other hand, production has to be rapid because deadline for the delivery of products has to be respected. For this reason, production needs technological instruments that are able to simplify and reduce the work of artisans without losing quality. The laser cutting technology uses the CAM system which gives input and controls the machine: as a consequence, the traditional artisan becomes a digital artisan because he does not cut the leathers by hands rather, he takes advantage of the technology which uses the same precision and the result does not lose quality.

An additional production process innovation regards the 3D printer. In a footwear company, accessories and components do not stay in background, rather they are as important as the upper part of shoes. For this reason, the creation of buckles, pearls, soles, and heels is very crucial for style, but at the same time their development is very long. The use of 3D printers can facilitate the production process, because it is able to use every kind of materials and print every kind of shapes – simple or complex. People have even printed a house with the 3D printer, so the construction of shoes should be simpler! 3D printer is a great innovation because it encourages people to build anything and to foster their creativity.

3.3.4 How does revenue is generated

When developing a business model, a company can arrive at the best solution for its customers, because it has found the perfect product, using the right technology. However, the company has not to underestimate its pricing strategy, because the success of its products depends on prices.

For developing the right pricing strategy, footwear companies of the Riviera del Brenta have to take into account the following four elements:

1. Customers: considering the study of customers for footwear enterprises of the Riviera del Brenta, we have observed that customers are wealthy women from 25 to 60 years old, passionate for fashion and style, digital users, who want shoes to represent them and their style, but also to include tradition, manufacturing, and Made in Italy.
2. Products: the value proposition is not a simple shoe, but a product which satisfy customers' desires, who are willing to pay a premium price. Certainly, price will cover production costs – which means costs for manufacturing and costs for materials.
3. Technology: as seen in the previous paragraph, technology is in the heart of shoes development. From a company point of view, technology allows to realise bespoke shoes, and to simplify the work of artisans; from a customer point of view, technology allows to participate to shoes development through devices such as smartphones and tablets, it allows to buy online, and to share his experience.
4. Competition: companies have also to evaluate the power of their competitors. When a new technology is introduced in a company, its competitors can imitate the technology with the possibility to ameliorate it. Thus, companies have to be always innovative and search for new technologies, if they want to be pioneers and take advantage of a temporary monopole.

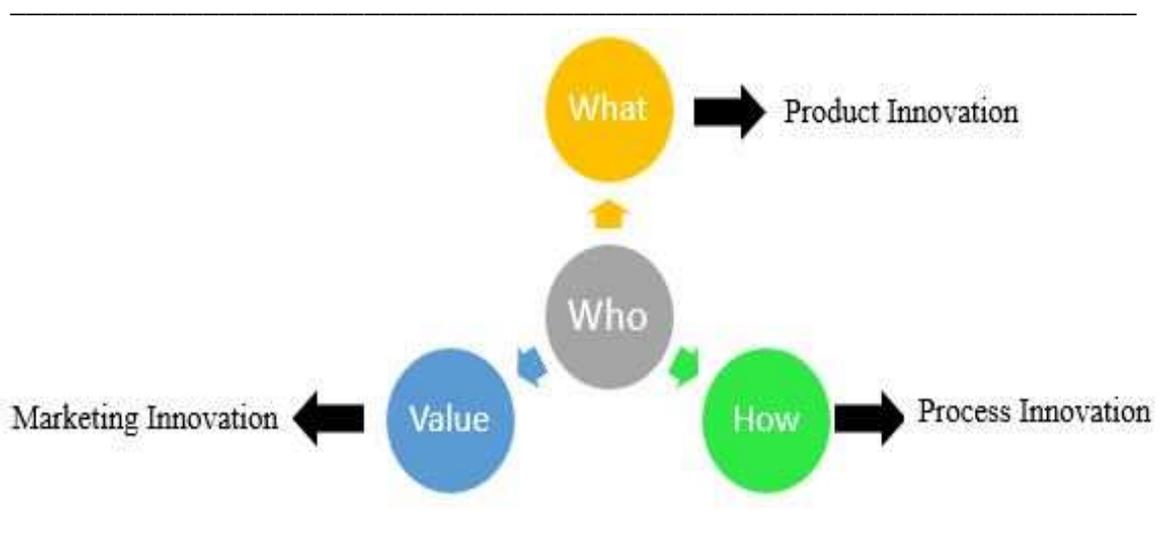
After having examined these four elements, a company can structure its pricing strategy: in case of bespoke shoes, a company should propose a premium price for its customers. The premium price is the highest price of a product in the market. The customer is willing to pay a high price since he perceives high quality, refined design, recognised brands, technology innovations, personalisation, and services around the product. These elements determine the premium price, and the customer accepts it. On the other hand, companies

need to create a strong and lasting relationship with their customers in order to make them loyal purchaser.

The application of the premium price represents a new marketing method, a marketing innovation, since it gives value to customers and improves the competitive advantage to companies.

3.5 Bespoke shoes

In conclusion, I take again this schema below in order to write additional elements. As the business model has been developed, answering the questions - who is the target, what does it offer, how is it realised, and how much does it cost – in order to demonstrate the different types of innovation that have been used:



Product, process, and marketing innovations play a crucial role for footwear enterprises: because thanks to the use of new technologies, people are encouraged to develop new solutions for the achievement of customisation. In this way, it is possible to realise bespoke shoes which satisfy customers' desires.

Many enterprises have focused their competitive strategy on product personalisation, allowing the customer to freely configure products and choosing different materials combinations. These opportunities support sales and personalisation activities through the use of interactive digital instruments – as described in the previous paragraphs -: on one hand, the customer is involved during the personalisation of shoes, on the other hand, the company is able to handle the configuration of shoes a priori.

“L’industria italiana si è spostata verso l’alto di gamma e verso produzioni su misura che interpretano i bisogni degli acquirenti. Tali produzioni richiedono un maggior valore aggiunto rispetto alla produzione di massa, perché implicano maggiori studi di progettazione, capacità di adattamento alla clientela, assistenza post-vendita, attività di marketing e di advertising, maggior cura nell’esecuzione dei lavori.”

Cipolletta, l’Industria, Il Mulino

In the last years, companies are proposing to the market an offering composed not only by products and services, but also by experiences. As a consequence, experiences are involving customers, who are put into contact with companies in a personal manner, so that the experience is remembered and fixed in their mind. The spread of technological innovations has allowed these interactions between companies and customers; besides, the purchasing experience has become relevant since customers are involved and entertained. In this way there are more probabilities to satisfy their desires, so that they can share positively their experience with family and friends, who become curious to try the experience.

Personalisation is able to guarantee a real competitive advantage, renouncing to economies of scale derived from standardised production, for developing economies of variety.

The emergence of digital technologies has created a strong impact on business models and especially on the way shoes are developed, produced and sold. A new figure has emerged inside companies: the digital artisan. The digital artisan is able to use technology without sacrificing quality, creativity and passion. His work can still be made by hands, but technology is integrated as well.

Chapter 4

4.1 Riviera del Brenta companies: a study case

In the last part of the thesis it will be presented a pragmatic analysis about some companies of the Luxury Footwear District of the Riviera del Brenta and a company outside the district, in order to make a comparison about the way technology and manufacturing work together. Each company has been chosen for a peculiar characteristic: Rossimoda which is the biggest footwear company, owned by a French holding; Enterprise X which is a medium independent brand company; Gritti – Pas de Rouge, which is a small independent brand company; and Santoni, which does not belong to the Riviera del Brenta district, but it is famous for its bespoke shoes.

The analysis has been conducted through interviews to entrepreneurs in order to deepen their business models and strategies, with a focus on their production processes: enterprises have been selected through the evaluation of their characteristics and their use of digital technologies in product development and production. As it will be observed, some enterprises are more traditional and use technology only as a support to manufacturing; other enterprises use technology in symbiosis with manufacturing; some of them operate most in a national level, others operate in an international level and have adapted their business model to different markets. Therefore, with this analysis it will be possible to describe the current scenario which characterises the Venetian footwear district.

The questions can be found in the Appendix A: the main arguments are the use of digital technologies, which kind of technologies, in which productive phases technologies are employed, and their level of internationalisation.

4.1.1 Rossimoda

Rossimoda is one of the biggest enterprises of the Footwear District of the Riviera del Brenta. The story of the company began in 1942 when Narciso Rossi opened a small lab for the production of shoes: he produced six pairs of shoes per day. After some years, he

decided to do business with his three sons, and one of them – Luigino – began to lead the management of the company. In the following years, the company specialised in luxury women shoes and it opened trade to international countries.

As a consequence, the company had the opportunity to be known and recognisable and it began to collaborate, in particular, with French brands. In 1963, the company obtained the Yves Saint Laurent licence in order to produce and distribute the footwear, and during the 1970s it enlarged the portfolio of brands stipulating collaborations and licences with Dior, Louis Vuitton, Fendi, and Givenchy (the brand is currently produced by Rossimoda, with Céline, Emilio Pucci, and Nicholas Kirkwood).

During the 1990s, the idea to produce owned brands spread inside the company, but in the end this idea got abandoned, preferring the production of luxurious brands in licence. What is more, this decision was taken for other two reasons: firstly, Rossimoda wanted to avoid conflicts with the brands in licence; secondly, the company would have had to invest money and resources in marketing and promotion.

Nevertheless, the success of Rossimoda can be measured through the quantity of demands of production from more and more brands: this fact increased visibility for international brands until the arrive of the new millennial which brought a turning point. Actually, the company began the collaboration with a French fashion group: LVMH; as a consequence, it started the production of Givenchy, Christian Lacroix, Marc Jacobs, and Dior.

In a few years, Rossimoda got acquired by the French group, which allowed the company to own financial and managerial resources. This turning point happened at the right moment, since the company had lost its most important brand – Yves Saint Laurent – which got acquired by another French Group competitor Kering. The acquisition from LVMH point of view aimed at obtaining a stricter control over the supply chain as a whole.

What is more, the development managerial plan brought transformation in distribution channels, in order to generate visibility for brands in licence on one hand, and to innovate the productive system on the other hand, through the actualisation of a more efficient organization and a standardised production, without limiting stylist creativity.

What about digital technologies?

As it has been observed, Rossimoda is classified as a medium enterprise with a turnover of 65 million euros. These characteristics allow the company to invest on technologies in order to guarantee a continuous amelioration on product development and production. What is more, Rossimoda benefits from two great opportunities: LVMH and the Riviera del Brenta institutions. LVMH is a world leader in luxury and it invests a lot for innovation in order to offer an excellent product to its customers, this is the reason why the French group supports the growth of its enterprises through Research and Development. The second element is represented by local institutions: their importance impacts the performance of enterprises. For example, the Polytechnique offers innovative technologies such as 3D scanners, 3D printers, which are available for every enterprise for product development. On the other hand, Rossimoda uses many instruments of digital technologies: for prototyping, technicians use the CAD program for designing the 3D model of shoes in computers: this program allows to reduce error margins in comparison with the 2D design of shoes. For production, laser cutting machines are used in order cut leathers for the upper part of shoes: this allows huge precision and avoids wastes of leather.

As far as personalisation of product is concerned, the company receives many VIP orders from the brands in order to make suitable shoes for people of the show business. However, these orders are managed in a traditional way: this means that the company receives information about measures, style, desires of the person concerned, and it proceeds with prototyping, checking, and production, without the use of any kind of digital technology.

4.1.2 Enterprise X

Enterprise X is a company situated in the Riviera del Brenta. It was born in 1934 as a little footwear crafts laboratory and nowadays the brand is known all over the world.

The company started to get oriented to the high-end fashion business during the 1950s, and that occasion gave it the opportunity to be recognised by important national and international brands which licensed their griffes for the production of shoes. In that period, the company established collaborations with Valentino, Chanel, and Dior.

With the beginning of the third Millennium, the company decided to focus on the creation of its own brand. It opened stores in the most important cities of Italy, such as Rome, Milan and Venice; then it opened stores in Paris and London; and in the last years, it opened new stores in Dubai, Tokyo, Hong Kong, New York, Las Vegas and San Paulo.

The particularity of the product is the use of precious inserts - such as diamonds and pearls - as if shoes were jewels. Actually, their shoes are considered “refined art objects” – as the founder always repeats, in order to emphasise the artisanal value and the knowhow which are behind the creation of shoes.

What about digital technologies?

In the last years, the company has opened an online platform for e-commerce, in order to sell shoes all over the world, especially where there are not stores. Besides, the company has developed a new website in which people can find a section reserved to celebrities: this section is full of photos of actresses, singers, and models, who wear personalised shoes. This kind of personalisation is the symbol of product innovation, even though it is managed in a traditional way as for the previous company.

What is more, the company has introduced a new communication strategy, focusing on the importance of manufacturing, handmade, knowhow, and telling about the history of the Venetian footwear district which has inspired many enterprises with its traditional heritage of aristocratic villas.

4.1.3 Calzaturificio Gritti - Pas de Rouge

Gritti – Pas de Rouge is a shoe factory which was founded in 1984. The company produces high range women footwear with the brand Pas de Rouge, and nowadays it is led by the sons of the founders.

Gritti is a small-medium enterprise, with 50 employees. It is structured by the control of the entire productive cycle, from product development, to production, until promotion and distribution. This structure allows them to have a strict control of the supply chain, because they choose their suppliers of raw materials (leather, heels, soles, accessories), then they proceed with the development of seasonal collections, with the support of a designer and a graphic who create models for shoes. When the collection is prepared, they participate in fairs and events, so that they can meet both acquired and potential clients

or sales representatives: during these events clients can observe the collection, can suggest modifications of colours or materials, and then they proceed with orders. When the company has collected the orders, it can launch the production.

Clients are mainly owners of stores, in which they sell many brands. The company Gritti only owns a flagship store in Rome. As a consequence, the relationship with customers is indirect because the company is supported by a national and an international network of sales agents. In the last years, the company is entrusting the management of an e-commerce platform for the online sale. The project is still primordial, but it will allow the company to reach far away markets, and people will have the opportunity to order shoes in an easier way.

The main markets for selling their brand are: Italy which owns 20%, Russia which owns 30%, North America which owns 20% and Far East and Oceania which own 30%. Europe has a very small percentage since the competition with higher and more luxurious brands is very tough.

What about digital technologies?

The company uses few instruments of digital technologies: CAD program for the design of models of shoes in computers and an automated cutting machine for the cutting of the upper part of shoes. In this study case, it can be observed that digital technologies are still a support for product development, in case of CAD, and for production, in case of the laser cutting machine. Manufacturing is considered in a traditional point of view where artisans realise shoes with their hands without any support of digital technologies.

However, this choice is not connected to the idea that manufacturing and digital technologies cannot work together, but rather by the fact that digital technologies, for the footwear industry, are very expensive and do not make profits yet. During the interview, it came out the fact that firstly, technologies must be used by specialised and skilled technicians, secondly, technologies need to be often updated, otherwise they become obsolete.

As a consequence, the company prefers to be innovative in production processes: actually, the element that characterises Gritti is the California Lasting Method through which the upper part of shoes is sewed to the insole creating a little sack, then the last is inserted in this sack and finally the shoes passes in the last phases of production. This method was

firstly used by Gritti shoe factory and still nowadays it presents an innovation since they try to ameliorate this method every day.

Finally, for Gritti shoes factory comfort and lightness are strength points for its strategy: they realise high heel décolleté making them comfortable and wearable all day long, without sacrificing style and fashion trends.

As far as personalisation is concerned, the company has observed that its clientele often demands for customised shoes, and sometimes they receive VIP orders. However, as for other enterprises, the management of customisation is traditional, and the company does not use digital technologies for this.

4.1.4 Santoni

This paragraph analyses a footwear enterprise outside the District of the Riviera del Brenta. Precisely, Santoni was founded in 1975 in the Marche, an Italian region famous for another Footwear district, more specialised in elegant men footwear. Nowadays Santoni gathers 650 employees with a turnover rate of 80 million euros, besides export counts 85% of production.

Over the years, Santoni reached a high range for its products, entering the circle of luxury brands: but how did it manage the dynamic competition which characterises this high-end fashion industry? Elements such as Made in Italy, passion for details, handmade shoes distinguish Santoni from its competitors, but it is not enough. Actually, the company has built its success on the binomial of tradition and innovation, arriving at creating bespoke shoes. Santoni offers a unique experience, an exclusive service, for customers who wants specific desires for their shoes: the company opens a dialogue with the individual customer, in order to know his style, what he prefers, what his needs are, then it takes the measures of foot, offers a huge range of materials and accessories with which it realises the shoes; it involves the clients during the production process in order to ameliorate the product and make it perfect for him. On the other hand, the production is always handmade, following traditional steps.

This customisation process is available for every person all over the world, since the website offers an individual section for each client. It is necessary to register his own profile on the website, describing style, preferences, and desires. Then the client inserts

the measures of his feet and he is contacted by the company in order to understand which kind of footwear he prefers, which kind of leather, which accessories, and so on. The relationship between the client and the company continues during the development process in order to verify if the prototype is suitable for the client. The product is delivered to the client who can choose between collecting the product at home or in stores.

4.1.5 Conclusions on case studies

In conclusion, through these four case studies it has been possible to observe that enterprises of the Riviera del Brenta presented three main characteristics which allow them to be competitive in adopting the business model described in the third chapter: firstly, they belong to a footwear district which allows and facilitate the diffusion and transmission of information and technologies, besides the fact that enterprises collaborate and support each other; secondly, enterprises of the footwear district receive support from local institutions: in particular, from the Footwear Polytechnique which sustain micro enterprises that cannot afford huge investments in digital technologies; finally, enterprises produce luxury shoes for a high-end clientele: on one hand, they often produce personalised pairs of shoes for celebrities, actresses, and singers of the show business; on the other hand, they sell footwear to rich clients who are demanding more sophisticated and personalised shoes and who can afford buying shoes for a premium price.

Conclusions

Going back to the introduction of this thesis, a question has been raised: “What is worth investigating?”.

Thus, after having articulated the argument through these chapters, the answer of the question is: since we are living inside the Fourth Industrial Revolution epoque, it is worth investigating how manufacturing footwear companies react to this moment of transformations and digital technologies.

From the point of view of enterprises, the economic crisis of the last decade has been the key factor which has provoked and, at the same time, engaged them. What does it mean? The crisis challenged all industries to determine which one would have survived. Precisely, the crisis has been a negative factor for enterprises which had to close; but, on the other hand, it has also been the factor through which most enterprises have begun to reevaluate their business models and adapt to a new market environment. Hence, the crisis gave them the opportunity to looking for brand new solutions in order to escape from it: and the result has been the beginning of the Fourth Industrial Revolution – also called 4.0 Industry. This revolution is still introducing innovative instruments and digital technologies which have been adopted by most enterprises for their business: traditional manufacturing became digital manufacturing, and traditional artisans became digital artisans. Nowadays, we are in the middle of the Fourth Industrial Revolution, and we are still observing the mutation of companies which are adopting new instruments.

From the point of view of consumers, the economic crisis has started a mutation process which has influenced consumer habits and life style. People have begun to search for deeper values, high quality, and personalisation. The modern consumer is more critic, selective, and careful at spending money for valuable goods, and not for mass products. What is more, it has become a digital consumer, since he searches for information before proceeding with the purchase, he reads feedback from other consumers, he is interested in the origins of each material, and he wants the product to reflect his personality, thus he looks for bespoke goods.

Therefore, economic crisis has influenced both consumers and enterprises: as a consequence, the former has begun to ask for personalised and unique goods without sacrificing quality and manufacturing; the latter has started producing bespoke goods, searching for high quality of raw materials, controlling their supply chains for certified origins, and introducing digital technologies in order to offer innovative goods and involve consumers during the production process.

This argument has been described from the footwear industry point of view, because in Italy, shoes better represent the Made in Italy manufacturing, passion, tradition, history, but at the same time, this kind of product is more and more requested to be bespoke. And thanks to new digital technologies, customisation of shoes has become easy and speed, even though the production behind stays manual and precise.

Therefore, the Fourth Industrial Revolution has introduced new digital technologies and scientific innovations that are called disruptive technologies. As a consequence, ancient business models have been destroyed by new technologies, and now enterprises have to engage in order to find a solution which exploits these technologies and creates a new business model which allows the synergy between manufacturing and technological innovations.

This is the reason why the brand-new business model described in the third chapter is the ideal solution for enterprises which want to obtain a competitive advantage: however, they are aware of the fact that their organisations have to re-modernise the structure in order to take advantage of digital instruments.

For a long time, manufacturing and technology have been considered two different and incompatible worlds, but in the last decades the success of many businesses has depended on the synergy created by their union. Actually, digital manufacturing is a new word which gather the best of the two worlds: nowadays, the digital artisan is the person able to discover the potentialities of products with the support of innovative instruments. What is more, Made in Italy and Digital Manufacturing have many aspects in common, because they combine heritage, knowhow, and new technologies, so that it is possible to overcome some limitations of the ancient crafts – such as time and costs – and gain competitiveness for business success.

Moreover, inside the districts, innovation processes are more and more relevant: firstly, because when enterprises of the same industry are situated in the same territory,

transmission of information, knowhow, competencies, and technologies, is fostered and facilitated; secondly, because enterprises of the same district establish durable and strong relationships with institutions for research - such as universities, laboratories, or scientific centres. This is the case of the Riviera del Brenta District, because the Footwear Polytechnic has a double objective: on one hand, it offers technical education for students who want to become designers or footwear technicians – at the same time it operates to avoid a generational gap -; on the other hand, it offers technological instruments – such as 3D scanners and printers – to support small enterprises which cannot afford these expensive instruments.

According to the survey organised by Fondazione Nordest with Ifis Bank in 2016, enterprises which have introduced digital technologies have also registered high performances in their business. The production index of these enterprises is 70 points superior than enterprises which have not introduced digital technologies. It is evident that there is a positive correlation between business performances and the use of digital technologies. What is more, the structure of Italian enterprises – mostly small and medium enterprises – allow them to be flexible when market mutations occur, and they are able to spread the bespoke business to the world, since they benefit from international competitiveness.

In conclusion, “as consumers and their expectations digitally evolve, so must the companies” – as reported in an article of Business of Fashion – Technology is eating Fashion. 4.0 Manufacturing is a new way to do business: it does not produce economies of scale anymore, but rather it aims at encounter and involve the consumer in order to produce economies of variety and personalization. Digital manufacturing has the power to push the possibility of product personalization according to consumers requests, and this is even more possible with the use of more and more innovative technologies

The concept of customisation is radically changing every aspect of fashion business: technologies are reducing the space between people and companies. Consumers appreciate sophisticated and connected products; they want to live experiences while purchasing and want to enter companies in order to participate in the productive process. As it has been described, the solution is the new business model through which enterprises adopt digital technologies: on one hand, for ideation and production of bespoke shoes through instruments – such as 3D scanner, 3D printers, laser cutting technologies -; on

the other hand, for selling and supporting consumers through Internet of things and Customer Relationship Management.

For this reason, it is important to predispose enterprises so that they are prepared to receive these technologies and educate their employees, because they have to develop new competences for responding to a dynamic productive environment.

The thesis demonstrates that the new business model for footwear enterprises satisfies new consumers' requirements for bespoke products, Made in Italy materials and manufacturing, high and certified quality, and digital instruments which connect and approach the producer to the consumer.

Digital manufacturing is a big opportunity for the growth of Made in Italy and consequently for the raise of our Country.

Appendix A

A. GENERAL DATA

Tell me about the history of the foundation of the company.

How many employees are there?

How many shoes are produced in a year?

Does the company belong to a holding? (If yes, which one?)

Describe the typology of shoes the company realises.

B. MARKET AND CONSUMERS

Describe the typology of consumers the company sell to.

How do you relate with your clients? (directly, with intermediaries, cooperation)

Do you produce your own brand or of third parties?

What are the channels through which do you sell your product?

Do you have an e-commerce platform? (turnover % realised by e-commerce)

What are the main countries to which do you sell?

How do you reach international markets?

What are the relevant characteristics for which your products are appreciated? What are the elements which differentiate you from the competitors? (price, quality, technology, design, huge range of products).

C. DIGITAL TECHNOLOGIES

Describe the product development process.

What are the main technologies the company uses for product development? (laser cutting, 3D CAD, 3D printer, 3D scanner, robotics).

These instruments are used inside the company or in outsourcing?

Describe the production process.

What are the main technologies the company uses for production? (laser cutting, 3D CAD, 3D printer, 3D scanner, robotics).

These instruments are used inside the company or in outsourcing?

Do you have specialised employees for the use of these instruments?

Do you have reorganised the structure of the company due to the introduction of new technologies?

What are the pros and cons of adopting digital technologies?

D. VALUES

How important are local institutions inside the district?

What are the institutions from which do you have support?

(If the company belongs to a holding) how important is the support of the holding?

What are the main advantages of belonging to a district?

Any disadvantages?

What are the main advantages of belonging to a holding?

Any disadvantages?

Do you think consumers still consider relevant the Made in Italy value?

Tell me other values you think consumers search for.

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