



Ca' Foscari
University
of Venice

Master's Degree programme

in Languages, Economics
and Institutions of Asia and
North Africa
(D.M. 270/04)

Final Thesis

The Bottled Water Market in China: the Acqua Filette s.r.l. experience

Supervisor

Ch. Prof. Renzo Riccardo Cavalieri

Assistant supervisor

Ch. Prof. Lala Hu

Graduand

Alessandra Pallone

Matriculation Number: 865510

Academic Year

2017 / 2018

前言

本文《中国瓶装水市场：以飞来特矿泉水为例》由不断阶段的分析以及逐章节更细致的讨论组成。

我的硕士论文的主题是水。水是人类生活的最基本需求，也是从来自自然界的简单物质变成可以作为国际市场上的商品的瓶装水。每个人都明白水对生命至关重要。但许多人才开始水对生活中的一切都至关重要——食物，能源，交通，自然，休闲，身份，文化，社会规范，以及几乎所有日常使用的产品。随着人口增长和经济发展推动对一切事物的需求加速，水的全部价值正变得越来越明显。

第一章分从全球的角度来看析了水资源的分配和它的质量特性：包括对人类需求的矿泉水的获得方式和管理控制、为了避免对当地的卫生和环境造成影响而制定的水运输标准。总的来说，地球上大约有 14 亿立方米的水。然而，只有 0.003% 在理论上是可用的，考虑到人类需要满足一定质量标准 and 实际经济成本，实际上只有 0.001% 的总量可用于人类。第二章主要研究的是瓶装饮用水，它被定义为所有食品和饮料行业中最具活力的市场。从产品的诞生和市场的肯定，本

章分析了各种瓶装水的发展历史。特别关注欧洲和意大利市场的条件及其法律和监管框架，然后对瓶装水的包装和标签进行分析，这是因为它们在瓶装水行业中有非常重要的作用。

第三章关注的是中国瓶装水市场，并考虑到影响餐饮业的所有主要增长动力如快速城市化、平均 GDP 增长、可支配收入增加、食品安全丑闻、生活方式改变等，关注健康的消费者增加、网络购物和社交媒体。通过市场调查，我们发现，近年来，考虑到国内和国外的水品牌，中国已成为世界消费瓶装水的第一梯队国家之一。事实上，今天我们只能考虑使用瓶装水的日常行为 - 购买和饮用瓶装水 - 不仅需要特别关注健康的身体，而且还需要特别是对中国人来说，提供特定品牌的购买体验。

最后第四章的目的是通过案例研究分析意大利瓶装水公司飞来特在中国出口的情况。通过与总经理和商务经理的面谈，我们更好地了解了公司的观点和目标、分销渠道和复杂市场中使用的战略。

结论显示，相关因素是如何影响一个外国公司及其产品是在中国市场上的成功的。尤其是这些成功和具体的策略有非常重要的关系，因为这些产品将成为中国市场上数字经济的基本构成。

INDEX

INTRODUCTION.....	1
CHAPTER I. THE ECONOMICS OF WATER.....	3
1.1 Water distribution.....	3
1.1.1 Surface water and groundwater.....	5
1.1.2 Water quality characteristics.....	7
1.2 Water for public health.....	10
1.2.1 Water for human consumption.....	11
1.2.2 Natural mineral water.....	13
1.3 Availability, quality and use of water resources for drinking use.....	15
1.4 Quality control and standards.....	17
CHAPTER II. BOTTLED DRINKING WATER.....	21
2.1 Bottled water.....	21
2.1.1 Variety of bottled water.....	23
2.1.2 History.....	25
2.1.3 Industry and market.....	27
2.2 Regulatory framework.....	30
2.2.1 EU Drinking Water Directive.....	31
2.2.2 Italian legislation.....	34
2.3 Packaging.....	36
2.4 Labelling.....	38

2.5 Environmental impacts.....	42
CHAPTER III. BOTTLED WATER MARKET IN CHINA.....	44
3.1 Beverage market in China.....	44
3.2 Bottled water market.....	50
3.2.1 The rise of bottled water.....	54
3.2.2 Market size.....	55
3.2.3 Water regulatory framework in China.....	57
3.2.4 Chinese brands.....	61
3.3 Entering the Chinese market.....	69
3.3.1 Foreign bottled water brands.....	76
3.3.2 Italian bottled water brands.....	82
CHAPTER IV. ACQUA FILETTE S.r.l. EXPERIENCE.....	86
4.1 The company.....	86
4.1.1 History.....	87
4.1.2 The product and the collection.....	90
4.1.3 Development in the domestic market.....	96
4.1.4 Development in the international market.....	97
4.2 Acqua Filette S.r.l. in the Chinese market: company’s managers interview...101	

CONCLUSION.....105

BIBLIOGRAPHY.....109

SITOGRAPHY.....111

INTRODUCTION

The analysis made during the course of my thesis, *The Bottled Water Market in China: Acqua Filette S.r.l. experience*, is composed by different phases, touched chapter by chapter for more detailed themes.

This Master Thesis' subject is water, considered all over the world as one of the life's basic requirements, that from a simple natural element becomes, in the form of bottled water, a commercial product on the international market.

In the first chapter of the thesis are summarized the results of the analysis conducted on the water distribution and its quality characteristics on a global perspective. Overall, our planet has about 1.4 billion km³ of water. However, it is estimated that only the 0.003% of the total amount is theoretically usable and only the 0.001% of the total is actually available for human use, as it is of sufficient quality and accessible with reasonable costs. The analysis made also concerns the methods of use, management and control of mineral waters for human consumption; the standards and requirements which regulate water distribution, in order to prevent the public health and the local environment.

In the second chapter the focus is on the bottled drinking water, defined as the most dynamic market of all the food and beverage industry. The analysis is conducted through the variety of bottled water, from the birth of the product and its affirmation on the market. Specific attention is devoted to the EU/Italian markets' conditions and their legal and regulatory frameworks, followed by the analysis on the packaging and labelling of bottled water, which play a crucial role in this industry.

The third chapter concerns the bottled water market in China, taking in consideration all the key growth drivers that influenced the F&B sector: a rapid urbanization, an average GDP growth with higher disposable income, food safety scandals, change in lifestyle with

more health-conscious consumers, the online shopping and social media. Through market surveys we know that, in the recent years, China has been one of the first countries in the world in the consumption of bottled water, considering national and foreign water brands. Today, in fact, what we could only consider as a daily routine gesture - to buy and drink bottled water - is not only a need that comes from a special attention for a healthy body, but also means, especially for the Chinese population, to make a buying experience of a particular brand.

At the end of this chapter, the examination focuses on the possible ways of entering the Chinese market that foreign companies can use, with all the advantages and disadvantages that each strategy involves.

Finally, the fourth chapter intends to analyze with a case study the experience of an Italian bottled water company, Acqua Filette S.r.l., who decided to export in China. Thanks to the interview conducted with the general manager and the commercial manager, we will better know the vision and the aim of the company, understanding the distribution channel and the strategy used in a complex market as the Chinese one.

In conclusion of this study, the conducted analysis will show how the success of a foreign company and its brand in the Chinese market depends on many factors, and in particular on the strategic choices made, taking into account that the positioning of the product on the online market is essential for a digital economy like the Chinese one.

CHAPTER I

THE ECONOMICS OF WATER

1.1 Water distribution

Water, which covers around 70 percent of the Earth's surface, comes in the forms of freshwater and saltwater. Although water is the most widely occurring substance on earth, in terms of total volume only 2.53 percent is freshwater while the remainder is salt water. However, not all of the freshwater is readily available for use by humans.

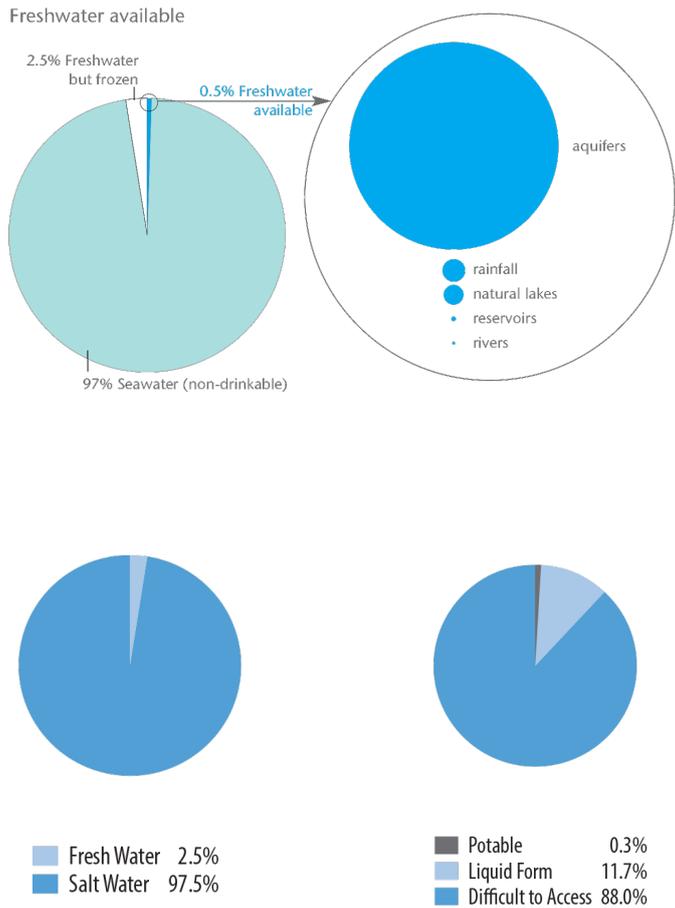
Water resources are renewable (except some groundwater), with huge differences in availability in different parts of the world and wide variations in seasonal and annual precipitation in many places. Precipitation is the main source of water for all human uses and for ecosystems.¹ As rain falls through the atmosphere, flows over and through the earth's surface, it is constantly dissolving material, forming chemical record of its passage from the clouds. Therefore, water supplies have a natural variety in quality, which depends largely on the source of the supply.

All our water comes from the water cycle and it is this process which controls our water resources.² The total volume of water in the world remains constant. What changes is its quality and availability. In terms of total volume, 97.5% of the world's water is saline with 99.99% of this found in the oceans, the remainder making up salt lakes. This means

¹ *Water for People, Water for Life*, United Nations World Water Development Report, Part II: A look at the world's freshwater resources. UNESCO, 2003, www.unesco.org

² GRAY, N.F., *Drinking water quality. Problems and solution*, Chichester Wiley, 1994, p.43.

that only 2.5% of the volume of water in the world is actually non-saline. About 75% of this freshwater is locked up as ice-caps and glaciers, with a further 24% located underground as groundwater, which means that less than 1% of the total freshwater is found in lakes, rivers and the soil³. Although seems to be a lot of water, in reality there is very little readily available for human consumption.



Water is constantly being recycled, a system known as hydrogeological cycle, powered by solar energy and gravity. These forces provoke a series of phenomena, variable in time and space, which are systematically repeated. The water of sea surface and Earth's surface

³ *Ibidem*

is constantly subjected to evaporation and passes into the atmosphere due to solar energy. Here the vapor condenses and because of the gravity falls in the form of precipitation (rainfall), partly on the hydrosphere and partly on the continental surfaces. In the first case, with the return of the waters into the sea, the cycle (called oceanic) quickly closes. In the second case, the path to the hydrosphere is longer and slower (continental cycle)⁴. The water which falls into land is the one that replenishes the soil and groundwater, feeds the streams and lakes, and provides all the water needed by plants, animals and, of course, humans. The cycle is continuous and so water is a renewable resource. In essence, the more it rains the greater the flow in the rivers and the higher the water-table rises as the underground storage areas (i.e. the aquifers) fill with water as it percolates (passes through a porous substance, or through small holes) downwards into the earth. Water supplies depend on the rainfall so when the amount of rain decreases then the volume of water available for supply will decrease. To provide sufficient water for supply all year round, careful management of resources is required.⁵

1.1.1 Surface waters and groundwater

Surface water is a general term describing any water body which is found flowing or standing on the surface, such as streams, rivers, ponds, lakes and reservoirs. Surface waters originate from a combination of sources:

- (1) surface runoff, rainfall which has fallen into the surrounding land and that flows directly over the surface into the water body;
- (2) direct precipitation, rainfall which falls directly into the water body;
- (3) interflow, excess soil moisture which is constantly draining into the water body;

⁴ CELICO PIETRO, *Elementi di idrogeologia*, Liguori editore, Napoli, 2003, p. 1.

⁵ GRAY, *Ibid*, p. 44.

(4) water-table discharge, where there is an aquifer below the body and the water-table is high enough, the water will discharge directly from the aquifer into the water body.⁶

The quality and quantity of surface water varies from one place to another and over time, due to factors such as geology, climate and surrounding land use.

Groundwater includes all water that is found underground within the rocks. Its presence depends primarily on the type of rock. Permeable rocks have tiny spaces between the solid rock particles that allow water and other fluids to pass through and to be held within the rock structure. The layers of rock that hold groundwater are called aquifers. Groundwater in an aquifer is replenished by rain and other forms of precipitation (any form of water, such as rain, snow, sleet or hail that falls to the Earth's surface) that has percolated downward into the aquifer. The level of water below the ground is called the water table. Groundwater can be extracted from wells or collected from springs. The depth that groundwater is taken from and the types of permeable rock it has passed through are important factors that affect its quality.

Groundwater, particularly from deep sources, may provide water of good microbiological quality. This is because bacteria, protozoa, viruses and helminths are filtered from the water as it passes through the layers of soil and rock. The quality of groundwater depends on a number of factors: (1) the nature of the rain water, which can vary considerably, especially in terms of acidity due to pollution and the effects of wind-blown from the sea which affects coastal areas in particular; (2) the nature of the existing groundwater which may be tens of thousands of years old; (3) the nature of the soil through which water must percolate; and (4) the nature of the rock comprising the aquifer.⁷

⁶ *Ibid*, p. 46.

⁷ *Ibid*, p. 61.

1.1.2 Water quality characteristics

Water is not just a chemical compound of hydrogen and oxygen. Inside there are many dissolved substances that determine its chemical and physical characteristics. The elements contained in the water (in the form of salts, ions and, to a lesser extent, organic compounds) are indispensable for the metabolic processes of the human organism and their contribution guarantees their survival.

The following description presents the main chemical-physical characteristics of water:

- Temperature

The water temperature must be measured, at the outlet of the springs or directly in the perforations, with a normal precision thermometer (graduated every 0.1 ° C) that must remain immersed for a few minutes. Spring waters with active circulation may have different temperatures depending on whether they are more or less cold at the time of infiltration (the infiltration temperature is linked to the season, the latitude and the altitude), depending on whether greater or smaller depth and depending on the hydrodynamic conditions existing in the aquifer.⁸

Based on the average annual temperature, the classification that best fits the sources of our latitudes is the one proposed by Mouren⁹ in 1910:

- Cold water (< 20)
- Hypothermal water (20÷35)
- Thermal water (35÷50)
- Hyperthermal (> 50)

- Dissolved oxygen

The amount of oxygen that dissolves in water can vary in daily and seasonal patterns, and decreases with higher temperature, salinity and elevation. The maximum solubility of oxygen in water at 1 atm pressure (standard air pressure at

⁸ CELICO, *Ibidem*, p. 72.

⁹ Classification of water based on temperature, according to Mouren (from Schoeller H., “*Sur la concentration des sels dessous dans les eaux souterraines*”, 1934.

sea level) ranges from about 15 mg/L at 0° C to 8 mg/L at 30° C—that is, ice-cold water can hold twice as much dissolved oxygen as warm water (Wetzel 2001). Dissolved oxygen comes from the atmosphere and from photosynthesis by aquatic plants, it is depleted through chemical oxidation and respiration by aquatic animals and microorganisms, especially during the decomposition of plant biomass and other organic material.

- Hydrogen concentration (pH)

pH is a measurement of the hydrogen ion (H⁺) concentration in water and is commonly used to describe the acid/base balance of water. A pH of 7 represents neutral conditions, while pH values greater than 7 indicate basic (alkaline) conditions and pH values less than 7 indicate acidic conditions. The pH of most natural waters is between 6.0 and 8.5.¹⁰

The current legislation, the Legislative Decree n. 31/2001 “Implementation of Directive 98/83 / EC concerning the quality of water intended for human consumption”, places the pH in the category defined “indicator parameters” and expects its value to be in the range $6.5 \leq \text{pH} \leq 9.5$.

- Electrical conductivity

It is a quantity that defines the ability of water to conduct electricity: in fact, since pure water does not have this capacity, the specific electrical conductivity is determined by electrolytes, that is, by the presence of dissolved particles with electric charge, positive and negative ions. This parameter is therefore directly proportional to the content of dissolved ions, but is not able to give any indication of their nature. It can instead be correlated with the dry residue, a parameter that represents the total content of dissolved substances, given that in the water most of the solubilized species are in ionic form. The specific electrical conductivity is expressed in microsiemens per centimeter at a given temperature, generally it is

¹⁰ Regional Aquatics Monitoring Program (“RAMP”), www.ramp-alberta.org

used 20 ° C ($\mu\text{S} / \text{cm}$ at 20 ° C). The current legislation indicates a maximum limit value of 2500 $\mu\text{S} / \text{cm}$ at 20 ° C.

- Dry residue determined at 180 ° C (saltiness)

Indicates the parameter that expresses the quantity of salts dissolved in a water (mineralization). On labels the fixed residue is always reported at 180 ° C: this value corresponds to the solid part that remains, after having evaporated at the temperature of 180 ° C, a liter of water. In mineral waters, the fixed residue is a parameter of considerable importance because it allows to classify mineral waters and to choose waters according to various needs. According to the classification provided by the Legislative Decree 105/92¹¹ we can distinguish waters between:

- minimally mineralized: up to 50 mg / L
- oligomineral: up to 500 / L
- slightly mineralized: from 50 to 500 mg / L
- rich in minerals: over 1500 mg / L

- Calcium (hardness)

With the term hardness of water we mean the content of calcium and magnesium salts. The hardness is generally expressed in French degrees (1 ° F corresponds to 10 mg / L of calcium carbonate). Much of the water resource distributed by the aqueducts of our territory has a natural presence of calcium and magnesium such as to classify the water from “hard” to “very hard”. From the regulatory point of view, the Legislative Decree n. 31/2001 does not provide specific reference and / or reference limits for calcium and magnesium: scientific research has in fact excluded health problems for a long time related to the presence of these ions in drinking water. Instead, a reference to hardness is found in the same decree: it is reported among the "indicator parameters" without a real limit value but only with

¹¹ DECRETO LEGISLATIVO 25 gennaio 1992, n. 105. Attuazione della direttiva 80/777/CEE relativa alla utilizzazione e alla commercializzazione delle acque minerali naturali.

a recommended interval (between 15 and 50 ° F) to demonstrate that there is no correlation between hardness and negative effects on human health.

1.2 Water for public health

Safe and readily available water is important for public health, whether it is used for drinking, domestic use, food production or recreational purposes. Improved water supply and sanitation, and better management of water resources, can boost countries' economic growth and can contribute greatly to poverty reduction.¹²

Historically, drinking water has been confused with the clear water. Considering the scientific knowledge of that era, this simplification was totally justified. Without the tools of chemistry and microbiology, even today, clarity (and probably taste) is the main criterion for classifying water as fit for human consumption. Therefore, the first treatment attempts were aiming at the improvement of the aesthetic conditions of water.

The availability of drinking water was always a prerequisite and necessary circumstance throughout the development of human civilization. For thousand years this factor has been critical for the choice of location for the development of the cities. The first great civilizations were developed close to rivers both for the availability of water suitable for human needs as well as transportation purposes. Initially the water purification was very limited. It is only in the last 200 years that water processing has been developed aiming at the improvement of the hygiene and aesthetic conditions.¹³

Safe drinking water, also known as potable water, is defined as water that does not contain micro-organisms and parasites or other substances, in quantities or concentrations such as to represent a potential danger to human health. Furthermore, the water must have

¹² WHO (World Health Organization), Drinking-water, Reviewed March 2018, www.who.int

¹³ Sklivaniotis, M. and A. N. Angelakis, *Water for human consumption through the history*. In *1st IWA International Symposium on Water and Wastewater Technologies in Ancient Civilizations*, 2006.

acceptable organoleptic characteristics for the consumer, including clarity, transparency, absence of color and abnormal odors.

Access to drinking water is essential for individual and public health. Today the role of human rights in the programs of the UN, WHO, and the European Union has taken on the ethical value of the most ancient civilizations, supported also by popular initiatives promoted by political and opinion movements, such as fundamental principle of social and economic well-being of every human community.¹⁴

The common definition of “drinking water” includes different types of water governed by different regulations: water intended for human consumption and natural mineral waters.

The European political decisions, translated into national laws, regulations and legislative measures, have the objective of ensuring that in every domestic and productive environment water is available in adequate quantities, continuity of supply and sustainable costs.

1.2.1 Water for human consumption

The term “water intended for human consumption” refers to treated or untreated drinking water, for the preparation of food and drink or other domestic uses, regardless of their origin, supplied via a distribution networks (aqueducts) or by tanks, in bottles or other containers. The aqueduct water can also be treated with appliances that have been defined, inappropriately, of domestic purification, to improve its organoleptic characteristics, to reduce its hardness or to reduce or eliminate the presence of pollutants.

The definition also includes waters used in food businesses for the manufacture, treatment, storage or placing on the market of products or substances intended for human consumption, excluding those waters whose quality has no impact on the healthiness of

¹⁴ Ministero della Salute, *Le acque destinate al consumo umano*, www.salute.gov.it.

the final foodstuff. Instead, natural mineral waters are excluded as they are subject to specific regulations.

The criteria to ensure the safety of water intended for human consumption, and the consequent minimum quality parameters, are the result of the evolution of multidisciplinary knowledge and are based on the guidelines of the World Health Organization.¹⁵

The quality of water intended for human consumption is governed by Legislative Decree No. 31 of 02/02/2001¹⁶, which incorporates Directive 98/83/EC¹⁷ and it's applied to all water intended for drinking, for the preparation of food and beverages, both at home and in food businesses, regardless of their origin and type of supply.

Water contributes significantly to health and good health is the essence of development. However, water's protective role is largely unseen and taken for granted in the wealthier countries. Its contribution to health is directly within households through food and nutrition, and indirectly as a means of maintaining a healthy, diverse environment. These two precious resources, water and health, together could enhance prospects for development.¹⁸

¹⁵ *Ibidem*

¹⁶ Decreto legislativo 02 febbraio 2001, n. 31. Attuazione della direttiva 98/83/CE relativa alla qualità delle acque destinate al consumo umano.

¹⁷ COUNCIL DIRECTIVE 98/83/EC of 3 November 1998 on the quality of water intended for human consumption, Official Journal of the European Communities.

¹⁸ Water for Health. WHO, Geneva, 2001.

1.2.2 Natural mineral water

Mineral waters are considered waters that, originated from an aquifer or underground reservoir, spring from one or more natural sources and have specific hygienic features and, eventually, healthy properties.

The natural mineral waters are different from drinking water because of their spring purity and conservation, for the constant level of minerals (trace elements or other constituents) and, where appropriate, for certain effects they can determine.¹⁹

The definitions highlight the differences between mineral and drinking water. The mineral waters must be microbiologically pure at the source and this purity can't be maintained with disinfection treatments; in this sense they are organoleptically more pleasant than water disinfected with chlorine or derivatives.

The healthy properties of mineral waters have always been known, once they were used to treat various diseases. Because of the easiness with which large quantities are made available with the large commercial distribution, they have lost their curative meaning and have taken the place, on our tables, of water distributed by aqueduct. These properties must be indicated on the label, as well as the temperature, the pH, the hardness and the content in dissolved salts, for which, unlike what happens for the waters for human use, there is no limit nor a reference value, although mineral waters mostly fall within the range of defined values for drinking water.

Natural mineral water means 'microbiologically wholesome' water, but ensures the absence of the main contamination indicators (parasites and pathogenic microorganisms, *Escherichia coli* etc.) both at source and during its marketing.²⁰

¹⁹ DECRETO LEGISLATIVO 8 ottobre 2011, n. 176. Attuazione della direttiva 2009/54/CE, sull'utilizzazione e la commercializzazione delle acque minerali naturali.

²⁰ Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral waters.

The characteristics of a natural mineral water have to be proved from different points of view:

- geological and hydrological, that requires a detailed description of the catchment site, considering the nature of the terrain, the stratigraphy of the hydrogeological layer and a description of the catchment operations;
- physical, chemical and physicochemical, that implies a report about the main physical and chemical analysis to describe the final characteristics of the mineral water (i.e. rate of flow of the spring, temperature at source, dry residues at 180°, pH, anions and cations, trace elements, toxicity of certain constituent elements);
- microbiological, ensuring the absence of the main contamination indicators;
- possible pharmacological, physiological and clinical effects. The clinical researches should be conducted in order to certificate the physiological effects and benefits on human health; they should be scientific studies, conducted in long term periods and with different methodologies.²¹

Based on the total salt content in grams after evaporation of 1 L mineral water dried at 180°C (dry residues), mineral waters can be classified as: waters with a very low mineral content, waters low in mineral content, waters with a medium mineral content and strongly mineralized waters.

In Italy, the most used classification is still the one proposed by Marotta and Sica (1933), subordinated to the authorization for the oral use of the mineral waters. Based on ion composition, mineral waters can be classified as: bicarbonate waters, sulphate waters, sodium chloride or salt water, sulphurous waters, etc. According to these parameters, mineral waters can be classified as follows:

- oligomineral and low mineralized water
- sulphurous water
- salt-bromine-iodine water

²¹ *Ibidem*

- radioactive water
- salt water
- sulphate water
- bicarbonate and carbonic waters
- ferrous arsenic water.²²

1.3 Availability, quality and use of water resources for drinking use

The management of water resources has a direct impact on human health as these resources are extremely vulnerable both to anthropogenic pressures and to climatic aspects. The rules must extend to the entire hydrological cycle, intercepting and containing pollution at source to ensure compliance of the water at the point where it is available for consumption. The distribution of water resources on the national territory is extremely differentiated due to the hydrogeological and climatic characteristics of the country.²³

In the presence of particular rocks, soils or sediments, the waters can be enriched with significant concentrations of toxic elements such as arsenic, fluorine, boron or uranium. This is relevant in Italy, given the geological history of our country, very long and complex, and characterized by the presence of numerous active volcanic areas. Surface and underground water bodies are exposed to anthropogenic contamination that may be particularly significant in areas of high agricultural and / or industrial pressure, human settlements without adequate wastewater treatment, polluting spills, extreme weather events or accidental phenomena of other nature.²⁴

²² Albertini MC, Dachà M, Teodori L, Conti ME, *Drinking mineral waters: biochemical effects and health implications - the state-of-the-art*, Int. J. Environmental Health, Vol. 1, No. 1, 2007, p. 157,158.

²³ <http://www.salute.gov.it/> : Disponibilità di risorse idriche per uso potabile.

²⁴ <http://www.salute.gov.it/> : Qualità delle risorse idriche per uso potabile.

Monitoring data on the quality of water resources to be used for human consumption, carried out in the context of environmental control activities, provided for by Legislative Decree 152/2006, are made available in the form of periodic reports and aggregations on a territorial basis. Of particular interest at national level is the Environmental Data Yearbook published periodically by the Italian Institute for Environmental Protection and Research (ISPRA²⁵).

The water resources used for the drinking water supply are mostly of underground origin and, to a lesser extent, originate from surface waters, with a minimum amount of marine or brackish water.²⁶

In the European context, based on OECD²⁷ data of 2013, our country uses about 30% of the available renewable water resources and is classifiable as subject to medium-high water stress.

The vulnerability of surface water bodies, taking into account the extreme weather events and potential anthropogenic contamination, can have significant impacts, both on quality and quantity, where there are questions of different water resources on a seasonal basis. As a result, complex and flexible treatment measures are required prior to distribution.²⁸

²⁵ ISPRA, Istituto Superiore per la Protezione e la Ricerca Ambientale

²⁶ ISTAT data 2012. (ISTAT: Istituto Nazionale di Statistica), <https://www.istat.it>.

²⁷ OECD, Organization for Economic Cooperation and Development

²⁸ www.salute.gov.it

1.4 Quality control and standards

The legislation requires compliance with the minimum health and physical, chemical, microbiological and radiological quality requirements of the water at the point where the water is available for consumption.²⁹

In order to protect public health, a dual-role approach, differentiating the roles and responsibilities of service providers from those of an authority responsible for independent oversight protective of public health (“drinking-water supply surveillance”), has proven to be effective.³⁰

The two functions of surveillance and quality control are best performed by separate and independent entities because of the conflict of interest that arises when the two are combined. In this:

- national agencies provide a framework of targets, standards and legislation to enable and require suppliers to meet defined obligations;
- agencies involved in supplying water for consumption by any means should be required to ensure and verify that the systems they administer are capable of delivering safe water and that they routinely achieve this;
- a surveillance agency is responsible for independent (external) surveillance through periodic audit of all aspects of safety and/or verification testing.³¹

In practice, there may not always be a clear division of responsibilities between the surveillance and drinking-water supply agencies. Whatever the existing framework, it is important that clear strategies and structures be developed for implementing water safety plans, quality control and surveillance, collating and summarizing data, reporting and

²⁹ <http://www.salute.gov.it/> : I controlli

³⁰ *Guidelines for drinking-water quality - 4th ed.*, WHO (World Health Organization), p.8.

³¹ *Ibid*, p.9.

disseminating the findings and taking remedial action. Clear lines of accountability and communication are essential. Surveillance is an investigative activity undertaken to identify and evaluate potential health risks associated with drinking-water. Surveillance contributes to the protection of public health by promoting improvement of the quality, quantity, accessibility, coverage (i.e. populations with reliable access), affordability and continuity of drinking-water supplies (termed “service indicators”). The surveillance authority must have the authority to determine whether a water supplier is fulfilling its obligations.³²

In most countries, the agency responsible for the surveillance of drinking-water supply services is the ministry of health (or public health) and its regional or departmental offices. In some countries, it may be an environmental protection agency; in others, the environmental health departments of local government may have some responsibility. Surveillance requires a systematic program of surveys, which may include auditing, analysis, sanitary inspection and institutional and community aspects. It should cover the whole of the drinking-water system, including sources and activities in the catchment, transmission infrastructure, treatment plants, storage reservoirs and distribution systems (whether piped or unpiped).³³

In order to effectively support the protection of public health, a national entity with responsibility for public health will normally act in four areas:

1. *surveillance of health status and trends*, including outbreak detection and investigation, generally directly but in some instances through a decentralized body;
2. directly establishing drinking-water *norms and standards*. National public health authorities often have the primary responsibility for setting norms on drinking-water supply, which may include the setting of water quality targets, performance and safety targets and directly specified requirements (e.g. treatment). Normative activity is not restricted to water quality but also includes, for example, regulation

³² *Ibidem*

³³ *Ibidem*

and approval of materials and chemicals used in the production and distribution of drinking-water and establishing minimum standards in areas such as domestic plumbing. Nor is it a static activity, because as changes occur in drinking-water supply practice, in technologies and in materials available (e.g. in plumbing materials and treatment processes), so health priorities and responses to them will also change;

3. representing health concerns in *wider policy development*, especially health policy and integrated water resource management. Health concerns will often suggest a supportive role towards resource allocation to those concerned with drinking-water supply extension and improvement, will often involve lobbying for the primary requirement to satisfy drinking-water needs above other priorities and may imply involvement in conflict resolution;
4. *direct action*, generally through subsidiary bodies (e.g. regional and local environmental health administrations) or by providing guidance to other local entities (e.g. local government) in surveillance of drinking-water supplies. These roles vary widely according to national and local structures and responsibilities and frequently include a supportive role to community suppliers, where local authorities often intervene directly.³⁴

Public health surveillance (i.e. surveillance of health status and trends) contributes to verifying drinking-water safety. It takes into consideration disease in the entire population, which may be exposed to pathogenic microorganisms from a range of sources, not only drinking-water. National public health authorities may also undertake or direct research to evaluate the role of water as a risk factor in disease, through case-control, cohort or intervention studies, for example. Public health surveillance teams typically operate at national, regional and local levels, as well as in cities and rural health centers.³⁵

Local environmental health authorities often play an important role in managing water resources and drinking-water supplies. This may include catchment inspection and

³⁴ *Ibid*, p.10.

³⁵ *Ibidem*

authorization of activities in the catchment that may have an impact on source water quality. It can also include verifying and auditing (surveillance) of the management of formal drinking-water systems. Local environmental health authorities will also give specific guidance to communities or individuals in designing and implementing community and household drinking-water systems and correcting deficiencies, and they may also be responsible for surveillance of community and household drinking-water supplies. They have an important role to play in educating consumers where household water treatment is necessary.³⁶

³⁶ *Ibid*, p.11.

CHAPTER II

BOTTLED DRINKING WATER

2.1 Bottled water

Bottled water is the most dynamic market of all the food and beverage industry. The term bottled water doesn't refer to one single product and the same designation can be used to qualify different products, depending on countries. Three major types of bottled water can be identified:

1. *Natural mineral water* is, in the European Union, an extremely specific product responding to strict criteria. It is wholesome underground still or aerated water, protected against pollution hazards and characterized by a constant level of minerals and trace elements. This water cannot be treated, nor added any exogenous elements, such as flavors or additives.
2. *Spring water* in Europe is also underground water protected against pollution hazards. It cannot be treated but it doesn't need to have a constant mineral composition. Water from different springs can be sold under the same brand name.
3. *Purified water* is surface or underground water that has been treated in order to be suitable for human consumption. It differs from tap water only through the way it is distributed (in bottles rather than through pipes) and its price.

In addition to these four major categories, the International Bottled Water Association (IBWA³⁷) considers three other categories of bottled waters: *Artesian Water/Artesian*

³⁷ IBWA: International Bottled Water Association, <https://www.bottledwater.org>

Well Water (water from a well that taps a confined aquifer (a water-bearing underground layer of rock or sand) in which the water level stands at some height above the top of the aquifer); *Drinking Water* (water sold for human consumption in sanitary containers. It must have no calories or sugar. Drinking water may be sodium-free or contain very low amounts of sodium. Flavors, extracts, or essences may be added to drinking water, but they must comprise less than one percent by weight of the final product or the product will be considered a soft drink. “Carbonated water,” “seltzer water,” “soda water,” and “tonic water,” are considered soft drinks³⁸); *Sparkling Bottled Water* (water that, after treatment and possible replacement with carbon dioxide, contains the same amount of carbon dioxide that it had as it emerged from the source. Sparkling bottled waters may be labeled as “sparkling drinking water”, “sparkling mineral water”, “sparkling spring water” etc.) and *Well Water* (water from a hole bored, drilled, or otherwise constructed in the ground, which taps the water aquifer).

So many different categories do not facilitate consumers’ identification of the product they buy. In some cases, bottled water is actually bottled tap water.

Different materials are used for the packaging of bottled water: glass; plastic (PVC and PET) and aluminum or steel cans. These packaging have different shapes, colors and capacities. They are an essential part of the bottled water marketing. In some cases, it is even possible to recognize the brand of the bottled water only thanks to the shape and color of its packaging.³⁹

Bottled water and water in containers are widely available in both industrialized and developing countries. Consumers purchase packaged drinking-water for reasons such as taste, convenience or fashion, but safety and potential health benefits are also important considerations.

³⁸ *The Myth and Reality of Bottled Water*, Peter H. Gleick, from *The World’s Water, The Biennial Report on Freshwater Resources: 2004–2005*.

³⁹ *Bottled water: understanding a social phenomenon*, Catherine Ferrier, April 2001.

2.1.1 Variety of bottled water

Bottled waters might all seem the same, but they are not. 97% of all bottled water sold in Europe is either natural mineral water or spring water. Each brand of natural mineral and spring water has its own distinctive taste, a unique set of properties and specific mineral composition which is derived from the geological conditions present in the area where the water is abstracted. This subsequently determines its natural flavor or taste.

Bottled water is a convenient and healthy beverage choice: still or sparkling, high or low mineral content, it offers great diversity to suit every taste preference and/or requirement.⁴⁰

- *Natural mineral water*

One of the defining characteristics of natural mineral waters is their original purity. These waters originate from protected underground water sources and must be safe to drink at source, in its natural state, without disinfection or chemical treatment. Natural mineral water can only come from specific designated groundwater sources, such as natural exits or boreholes.

Each natural mineral water produced in an EU Member State must receive official recognition from that State's competent national authorities. This named source must then be registered in the Official Journal of the European Union.

No two types of bottled waters are the same. Each natural mineral water has a very distinctive taste. The taste depends on the waters' specific mineral composition which is related to the geological make-up and the natural environment from where the water is abstracted.

Natural mineral water has a distinctive mineral composition, which always remains stable. The composition depends on the geographic location from where

⁴⁰ EFBW, European Federation of Bottled Waters, www.efbw.org.

the water is drawn and is specific to each brand (ranging from a very low mineral content <50 mg/l, to very high >1500 mg/l).⁴¹

Characteristic constituents, represented by the main minerals (such as calcium, magnesium, chloride, sodium, sulfate), give natural mineral water its natural balance and taste. These constituents must remain unaltered from the point of origin at source right to the final consumer and must be stated on the label. The label must also state the place of origin and the name of the source.

Natural mineral water must be bottled directly at source. This is done via direct, state-of-the-art pipeline connections from the source to the bottling plant. In Europe, the transport of natural mineral water in tanker trucks is forbidden. Bottles are designed to protect the water quality and are fitted with a tamper-proof seal.

They must meet the highest quality standards and are strictly regulated by EU and national legislation to ensure that natural mineral waters are of proven natural origin, meet the highest quality standards and are protected from any pollution. Some natural mineral waters may claim to provide certain health benefits, depending on their composition. Natural mineral water can be either still or sparkling. Sparkling water, also known as carbonated water, contains carbon dioxide. This gas may be naturally occurring or may be added.

- *Spring water*

Spring water, like natural mineral water, comes from a named and recognized underground source. It must be microbiologically safe and wholesome to drink and where it must be bottled directly at source without disinfection or any chemical treatment. The main differences between spring water and natural mineral water are that a stable mineral balance is not a requirement for spring waters (though this is often the case) and mineral composition need not be stated on the label (though many producers nevertheless choose to do so). Also, for

⁴¹ *Ibidem*

chemical parameters, spring water must only meet conventional drinking water standards (as for tap water).

There is no formal recognition process for spring waters (as there is for natural mineral water) but quality monitoring and protection of the source must be maintained.

- *Bottled drinking water*

Bottled drinking water, also known as table water, may originate from various sources, including groundwater, surface water and municipal supply.

Bottled drinking water must comply with national and EU drinking water regulations, which are different to the rules governing natural mineral water and spring waters. Bottled drinking water, also known as “table water”, is commonly treated and disinfected for taste. Purification by chemical and physical treatment, such as chlorination and reverse osmosis, is common practice.⁴²

2.1.2 History

Natural mineral waters and spring waters are an important part of Europe's cultural heritage and have been enjoyed and recognized for their purity for hundreds of years.⁴³

The ancient Romans recognized the benefits of drinking and bathing in natural waters. Roman public baths were used for health, hygiene and recreational purposes. As their empire grew, the Romans built baths throughout Europe, from the Mediterranean to the banks of the Rhine and Danube. The modern thermal resorts of today derive from the Roman tradition and some have even been developed on or near these historical sites.

⁴² www.efbw.org

⁴³ *Ibidem*

The curative properties of natural mineral waters became a topic of renewed interest by the 18th century. In an era of limited disease prevention, natural mineral waters were increasingly regarded as an important means of healing. By the 19th century thermal resorts had become fashionable destinations for the wealthy who visited to bathe and enjoy the therapeutic benefits of mineral water.

At a time when the effects of pollution and illnesses contaminated the municipal supply, water was not always sanitary or safe to drink. Water borne illnesses such as cholera and typhoid encouraged people to seek uncontaminated, natural drinking water from springs.⁴⁴

With the success of thermal resorts and the recognized therapeutic benefits of mineral and spring water, people sought to take the medicinal waters from the thermal towns they visited and continue benefiting from their healing properties.

The bottling and commercialization of natural mineral waters first began in Europe in the mid 16th century, with mineral water from Spa in Belgium, from Vichy in France, from Ferrarelle in Italy and Apollinaris in Germany.

It is said that the first mechanical corking machine was invented in France in 1840 and bottling plants emerged throughout the continent by the late 19th century. As such, other European countries also adopted the trend of bottling waters from the source, including Malvern, England's first bottled water in 1851, Germany's Appolinaris in 1892 and the Italian mineral water, San Pellegrino in 1899. Bottled waters were sold as medicinal treatment in pharmacies until the 20th century.⁴⁵

By the end of the Second World War, bottled water became more widely distributed through grocery stores and began to be served in cafés and restaurants as a beverage.

⁴⁴ *Ibidem*

⁴⁵ *Ibidem*

Today, bottled water is readily available as a convenient and healthy beverage in a wide range of formats and packaging materials.

2.1.3 Industry and market

The bottled water industry is a huge business that involves many of the biggest food brands in the world and worth billions. It has grown in the last decade and today millions of people around the world, in developed and developing countries, consume bottled water regularly.⁴⁶

The origin of the industry is in the early 1800s. Amongst the early sellers of bottled water are names that are still known today: Evian, San Pellegrino, Perrier, and Vittel, among others.

Regulation of the bottled water industry began in the mid-nineteenth century in Europe. In order to sell mineral water, a company had to prove that the mineral content of water was stable over two years. In the early 1900s clean water was not widely available everywhere and the bottled water industry thrived, both in the US and in Europe.

When clean, safe and cheap drinking water was becoming widely available, the demand for bottled water decreased and the industry declined sharply. The bottled water industry struggled to survive until the 1970s, when the trend changed. Sales have been growing dramatically since then.

During the early 1990s controversies concerning bottled water quality began to emerge. Few occasions of water contamination (in particular: Perrier water contamination with high levels of benzene, and Natural Springs contamination with high levels of coliform bacteria) raised the quality of bottled water onto the agenda and resulted in improved regulation.

⁴⁶ Yael Parag and Tamar Opher, WATER AND HEALTH, *Bottled Drinking Water*

Bottled water is the fastest-growing beverage category in the world; its industry is extremely prosperous, involving companies with different histories and approaches to water.⁴⁷

Bottled water is a booming and very competitive market involving numerous companies: in 1992 in the United States, there were 700 brands of bottled water produced by 430 bottling facilities.⁴⁸ Although bottled water is a world market, with companies present world-wide, 75% of it is still controlled by local actors. Three major types of bottled water companies compete on this market:

1. *Companies* that were created to run and market one specific brand of bottled water, for instance Perrier or Evian. Some of them are century-old and family-owned, but most of them have grouped or are now under control of major multinational food companies, in particular Nestlé and Danone.⁴⁹

Danone and Nestlé have a long tradition in selling natural mineral waters. Nestlé was number 1 on the world market of bottled water with a turnover of about US\$ 3.5 billion in 1999, representing 15.3% of the world market share and 67 bottling factories employing over 18'000 people in the world. Nestlé/Perrier-Vittel S.A. owns well-known brands in 17 countries, like Perrier, Contrex or Vittel (France), Arrowhead, Poland Spring, Calistoga (United States), Buxton (UK), Fürst Bismarck Quelle, Rietenauer (Germany) or San Pellegrino (Italy). Danone, holding 9% of the world market share with a turnover of about US\$ 1.5 billion, challenged Nestlé. Danone came first in some regions: Latin America and Asia-Pacific. Its best-known brands are Evian⁵⁰, Volvic and Badoit.

⁴⁷ *Ibidem*

⁴⁸ *Bottled water: pure drink or pure hype?*, Olson E., 1999, Natural Resource Defense Council (NRDC)

⁴⁹ *Bottled water: understanding a social phenomenon*, Catherine Ferrier, April 2011.

⁵⁰ The first bottle of Evian appeared on the market in 1830. At the time, the water was sold in earthenware jugs. Evian received its first ministerial approval as a natural mineral water in 1878. In 1892, the city of Evian leased the company the water springs and the casino until 2027 (Evian, 2000).

Evian is now world number 1 for natural mineral still water, with 6 million litres produced daily 1'441 million litres sold in 1999 to 130 countries. The company has subsidiaries in Belgium, UK, Germany,

2. *Sodas or soft drinks companies* turned to the very profitable bottled water market. Coca-Cola and PepsiCo, for example, take advantage of their large world-wide network of bottlers which provides them with immediate access to the markets. To purified and aerated water used to make sodas is added a concentrated solution of minerals and sold as purified, enriched water, on the same principle as Coca-Cola and Pepsi. Like for colas, benefits for the company came from the sale of mineral concentrates to local bottlers.

PepsiCo's Aquafina was launched in 1995 in the USA where it had a turnover of US\$ 600 million (Belot 2000). According to Olson (1999), Aquafina "has taken Pepsi into the top 10 sellers of bottled water in the United States, with sales jumping 126 percent in one year to more than US\$52 million in 1997".⁵¹

3. *Companies providing tap water*, with extensive know-how in water purification and pipe distribution turned to a more lucrative way of distributing water.

Suez-Lyonnaise des Eaux and Vivendi, for instance, are specialists for public water treatment and distribution. They now develop water services, such as home and office deliveries of water carboys. Vivendi recently bought USFilter, producer of Culligan, a purified water sold in carboys. Roche Claire, a subsidiary company of Suez-Lyonnaise des Eaux, is specialised in carboy water. Water production, treatment and services can now be covered by the same company. Suez and Vivendi own the techniques, the equipment and the know-how to treat water. They don't want to lose ground on Coca-Cola, PepsiCo, Danone and Nestlé on the purified water market, particularly since they provide the water to sodas and soft drinks companies.⁵²

Switzerland, USA and Canada. Evian was employing 1'632 people by the end of 1999, including 900 at the bottling factory. The company had a turnover of US\$ 500 million in 1999 (Danone, 2000).

⁵¹ C. Ferrier, *Bottled water: understanding a social phenomenon*, cit, pp. 10-11.

⁵² *Ibidem*

Right now, the global bottled water industry is in one of those strange and energetic boom phases where every week, it seems, a new product finds its way on to the shelves. Not just another bland still or sparkling, but some entirely new definition of the element. It is a case of capitalism at its most hyperactive and brazenly inventive: take a freely available substance, dress it up in countless different costumes and then sell it as something new and capable of transforming body, mind, soul. Water is no longer simply water, it has become a commercial blank slate, a word on to which any possible ingredient or fantastical, life-enhancing promise can be attached.

And it's working. Over the past two decades, bottled water has become the fastest-growing drinks market in the world. The global market was valued at \$157bn in 2013 and is expected to reach \$280bn by 2020. Sales of water are 100 times higher than in 1980.⁵³

2.2 Regulatory framework

Drinking water, or potable water, is water intended for human consumption with no other ingredients except that it may contain safe and suitable disinfectants. Drinking water is regulated at various levels. In the European Union the primary piece of legislation governing drinking water is the water framework directive and each member state is responsible for its implementation and inspection. Then, individual countries in the EU can set themselves stricter drinking water regulation. The regulation of bottled water is complex. Four levels of regulation apply to the bottled water industry: international, national, local and trade associations standards. In many places bottled water is considered a food item and regulated accordingly.

In the US the FDA (Food and Drug Administration) regulates bottled water under the Federal Food, Drug and Cosmetic Act (FFDCA). In the EU it is covered by the European

⁵³ *Liquid assets: how the business of bottled water went mad*, by [Sophie Elmhirst](https://www.theguardian.com/business/2016/oct/06/liquid-assets-how-business-bottled-water-went-mad?CMP=share_btn_link), The Guardian, https://www.theguardian.com/business/2016/oct/06/liquid-assets-how-business-bottled-water-went-mad?CMP=share_btn_link

Union (Natural Mineral Waters, Spring Waters and Other Waters in bottles or containers) Regulations 2016 – S.I. No. 282 of 2016⁵⁴.

This legislation covers the definitions of water types, their exploitation, treatment, microbiological criteria, chemical contaminants, sales description, labeling and packaging. Bottled water under the categories “spring waters” and “other waters” must also comply with European Communities (Drinking water, No. 2) Regulations, 2007 (S.I. No. 278 of 2007).⁵⁵

2.2.1 EU Drinking Water Directive

All bottled waters are strictly regulated under European law. The Drinking Water Directive (Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption) concerns the quality of water intended for human consumption. Its objective is to protect human health from adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.⁵⁶

The consolidated text of the Directive with its latest amendments including Commission Directive (EU) 2015/1787 of 6 October 2015 can be found in the Directory of European Union consolidated legislation.

The Drinking Water Directive applies to:

⁵⁴ These Regulations give effect to Council Directive 98/83/EC of 3 November 1998, Commission Directive 2003/40/EC of 16 May 2003, Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009, Commission Regulation (EU) No. 115/2010 of 9 February 2010, Council Directive 2013/51/EURATOM of 22 October 2013 and Commission Directive (EU) 2015/1787 of 6 October 2015.

⁵⁵ Yael Parag and Tamar Opher, *Ibidem*

⁵⁶ http://ec.europa.eu/environment/water/water-drink/legislation_en.html

- all distribution systems serving more than 50 people or supplying more than 10 cubic meters per day, but also distribution systems serving less than 50 people/supplying less than 10 cubic meters per day if the water is supplied as part of an economic activity;
- drinking water from tankers;
- drinking water in bottles or containers;
- water used in the food-processing industry, unless the competent national authorities are satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.

The Drinking Water Directive doesn't apply to:

- natural mineral waters recognized as such by the competent national authorities, in accordance with Council Directive 80/777/EEC of 15 July 1980 on the approximation of the laws of the Member States relating to the exploitation and marketing of natural mineral waters and repealed by Directive 2009/54/EC of 18 June 2009 on the exploitation and marketing of natural mineral waters; and
- waters which are medicinal products within the meaning of Council Directive 65/65/EEC of 26 January 1965 on the approximation of provisions laid down by law, regulation or administrative action relating to medicinal products and repealed by Directive 2001/83/EC of 6 November 2001 on the Community code relating to medicinal products for human use.

The Directive laid down the essential quality standards at EU level. A total of 48 microbiological, chemical and indicator parameters must be monitored and tested regularly. In general, World Health Organization's guidelines for drinking water and the opinion of the Commission's Scientific Advisory Committee are used as the scientific basis for the quality standards in the drinking water.

When translating the Drinking Water Directive into their own national legislation, Member States of the European Union can include additional requirements e.g. regulate additional substances that are relevant within their territory or set higher standards.

Member States are not allowed, nevertheless, to set lower standards as the level of protection of human health should be the same within the whole European Union.

Other important directives concerning the drinking water legislation are the Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the use and marketing of natural mineral waters;⁵⁷ the Commission Directive 2003/40/EC of 16 May 2003 that determines the list, concentration limits and labeling indications for the components of natural mineral waters, as well as the conditions of use of the air enriched with ozone for the treatment of mineral waters and spring waters.⁵⁸

In addition, the Codex Alimentarius has established hygiene guidelines and standards for bottled waters, while WHO gives general provisions on drinking water. The Codex Alimentarius, or "Food Code" is a collection of standards, guidelines and codes of practice adopted by the Codex Alimentarius Commission. The Commission, also known as CAC, is the central part of the Joint FAO/WHO Food Standards Program and was established by FAO and WHO to protect consumer health and promote fair practices in food trade.⁵⁹ These food standards and related texts aim at protecting consumers' health and ensuring fair practices in the food trade. The publication of the Codex Alimentarius is intended to guide and promote the elaboration and establishment of definitions and requirements for foods to assist in their harmonization and in doing so to facilitate international trade. Every country's laws and administrative procedures contain provisions with which it is essential to comply.⁶⁰

⁵⁷ Official Journal of the European Union L 164/45 of 26.6.2009, <http://eur-lex.europa.eu>

⁵⁸ Official Journal of the European Union L 126/34 of 22.5.2003, <http://eur-lex.europa.eu>

⁵⁹ <http://www.fao.org/fao-who-codexalimentarius/en/>

⁶⁰ *Ibidem*

2.2.2 Italian legislation

The Italian legislation concerning the quality of surface and groundwater intended for human consumption basically derives from the application of EU Drinking Water Directive (1998), according to the following steps:

- I. 1998 - EU Drinking Water Directive 98/83/EC
- II. 2001 - Legislative Decree no. 31 of 2 February 2001, concerning “*Attuazione della Direttiva 98/83/CE relativa alla qualità delle acque destinate al consumo umano*”, published in “*Supplemento Ordinario alla Gazzetta Ufficiale della Repubblica Italiana*, no. 52 del 3 Marzo 2001” (Implementation of EU Drinking Water Directive 98/83/EC on the quality of water intended for human consumption)
- III. 2002 - Legislative Decree no. 27 of 2 February 2002, concerning “*Modifiche ed integrazioni al D.Lgs. 2 febbraio 2001, no. 31, recante attuazione della direttiva 98/83/CE relativa alla qualità delle acque destinate al consumo umano*” (An integration/modification of the previous Legislative Decree, no. 31/2001)
- IV. 2006 – Legislative Decree no. 152 of 3 April 2006, concerning “*Norme in Materia Ambientale*”, published in “*Supplemento Ordinario alla Gazzetta Ufficiale della Repubblica Italiana*, no. 88 del 14 Aprile 2006” and further modifications.⁶¹

The main law text establishing drinking water microbiological/chemical features and contaminants concentration limits is the above mentioned Legislative Decree no. 31 of 2 February 2001, concerning “*Attuazione della Direttiva 98/83/CE relativa alla qualità delle acque destinate al consumo umano*” (Implementation of EU Drinking Water Directive 98/83/EC on the quality of water intended for human consumption).

The Decree concerns health-related quality standards of water intended for human consumption either in its natural status or after treatment, regardless of its origin and whether it is supplied from a distribution network, from a tanker, or in bottles or containers. It refers to water intended for drinking, cooking, food preparation or other

⁶¹ *Italian legislation on drinking water quality and quantity*, Stefano Della Sala, 2 July 2015, p. 3.

domestic purposes, but also to water used in food (and drinks) production, affecting the final product wholesomeness. It defines:

- point of compliance;
- involved actors (State, Regions, Local Health Unit, Utilities, etc.), general obligations and specific competences and responsibilities;
- possible derogations and exceptional circumstances;
- quality standards: parameters and parametric values applicable to water intended for human consumption (microbiological and chemical parameters), as well as indicator parameters;
- quality assurance of treatment, equipment and materials;
- remedial actions and restrictions in use;
- internal and external monitoring;
- check and audit monitoring and other kind of official control activities to be implemented in order to protect human health from adverse effects of any contamination of water intended for human consumption;
- parameters to be analyzed, and specific methods of analysis for some of them, to ensure reliable check and audit monitoring;
- frequency of sampling, depending on the volume of water produced or distributed (different for check and audit monitoring);
- procedures to be implemented and reporting activity in case of non-compliance with the given parametric values.⁶²

⁶² *Ibidem*

Other regulations of major importance are:⁶³

- Legislative decree 8 October 2011, n. 176
Implementation of Directive 2009/54/EC on the use and marketing of natural mineral waters.
- Decree 7 February 2012, n. 25
Technical provisions concerning equipment for the treatment of water for human consumption, issued by the Ministry of Health.
- Decree 10 February 2015
Evaluation criteria for the characteristics of natural mineral waters, issued by the Ministry of Health.
- Legislative decree 15 February 2016, n. 28
Implementation of Council Directive 2013/51/EURATOM of 22 October 2013 laying down requirements for the protection of the health of the population in relation to radioactive substances in water intended for human consumption.

2.3 Packaging

Bottled water is available in different sizes and available in almost every superstore, café, restaurant and juice corner. Most of the time, it is kept in the commercial refrigerators or deep freezers with other items like energy drinks and juices etc.

Packaging plays a crucial role in protecting our food and avoiding unnecessary waste of foodstuffs. Moreover, it helps protect the original purity and unique specificities of natural mineral waters, ensuring they remain pure and microbiologically safe.⁶⁴

Almost all of the mineral water bottles are made up of disposable plastics having a unique and simple shape. The latest bottle packages are modified into a bit advanced shape

⁶³ For all the regulations see Gazzetta Ufficiale della Repubblica Italiana, <http://www.gazzettaufficiale.it/>

⁶⁴ <http://www.efbw.org/>

having designed lines and contours. The shape of the mineral water bottle has the eye-catching ability which can develop the interest of the consumer to buy it.⁶⁵

Fresh water is a blessing. Normally, the bottle water packaging is kept transparent but it is also available in colored bottles. The choice of colors is not random like other things but in fact the ones which give a clear visual of the liquid inside it. Most of the bottle packaging manufacturing companies use the blue shades which can be seen when the light falls on the bottle or water. This special appearance enhances the purity and freshness of the water much more.

In the case of natural mineral water and spring water packaging plays a vital role in ensuring we can bring the purity of the source to your shopping cart without interference of the integrity of the product. All packaging material for bottled water must comply with EU and national legislation, including regulations related to food contact materials.

All drink containers used by the bottled water industry are recyclable, as PET (polyethylene terephthalate), glass or aluminum. These materials are all safe and abide by strict food contact regulations.

The bottled water industry has made great strides to streamline both its primary packaging (bottles, caps and labels) and secondary packaging (film, pallets and crates).⁶⁶ Innovative design and new packaging solutions have also contributed to improvements in packaging and weight reduction. Some producers are also looking for alternative materials in the production of their new bottles. PET nonetheless remains one of the most durable, lightweight and resistant packaging currently available, not to mention that it is recyclable.⁶⁷

The packaging material used for the water bottles is not an ordinary plastic material. The latest water packaging bottles are made with the usage of fewer polymers or resin per

⁶⁵ <http://www.trendingpackaging.com/whats-about-packaging-in-water-bottles/>

⁶⁶ *Ibidem*

⁶⁷ *Ibidem*

package. These bottles are easily recyclable and environmental friendly thus the consumers feel satisfaction with its usage. Other water packaging includes the flexible pouches which are also made by keeping the environmental aspects in mind with the lesser number of resin per package. These parameters not only serves as being environmental friendly but also is the cause of increasing sustainability of the package. Keeping the water fully protected, fresh and pure along with saving the natural environment is what makes it the ideal and suitable choice for water bottle packaging.

The label or tag of the bottle packaging also plays a vital role in the determination of the qualitative nature of the water. The tag or label is not wrapped entirely around the bottle as it may hide the panels of the bottle which eventually can cause almost zero visibility of the water. This is where the confidence level and trust of the consumer is ruined, therefore, during the bottle packaging, it must be kept in mind that covering the entire area can lead to the decrease in the sale as the consumer is unable to see the water inside it.⁶⁸

2.4 Labelling

Labels on bottled water provide the consumer with helpful and important information. These include specific details on the type of water that has been purchased, the name and location of the source, the name/trademark of the producer and in the case of natural mineral waters, the mineral characteristic composition.⁶⁹

1) Natural Mineral Water

Each Natural Mineral Water has a recognized and named source, which is registered in the Official Journal of the European Union. All production from the source must carry the name and location of the source on the label, and must have the same trade description. If the trade description of the NMW is different from

⁶⁸ <http://www.trendingpackaging.com/whats-about-packaging-in-water-bottles/>

⁶⁹ <http://www.efbw.org/>

just the name or location of the source, then either the name or the location of the source must be printed in letters at least one and a half times larger than any part of the trade description.

The Sales Description for natural mineral water must be one of the following:

- “Natural Mineral Water” referring to a still or non-effervescent product
- “Naturally Carbonated Natural Mineral Water” meaning an effervescent Natural Mineral Water whose carbon dioxide content is the same after bottling as it was at source
- “Natural Mineral Water Fortified with Gas from the Spring” meaning an effervescent Natural Mineral Water whose carbon dioxide content derives from the same ground water but the carbonation level after bottling is greater than that in the source
- “Carbonated Natural Mineral Water” meaning a sparkling Natural Mineral Water which has been carbonated at least in part with carbon dioxide from another origin.

Note that the words “Natural Mineral Water” may only be used on waters which have been recognized and registered in the Official Journal of the European Union. Even if a water satisfies all the criteria required for Natural Mineral Water but it does not have official recognition, not only can it not be sold as a Natural Mineral Water, but it must not be labelled in such a way that it could be confused with a specific Natural Mineral Water.

2) Spring Water

As with Natural Mineral Water, each Spring Water has a recognized and named source, although unlike NMW the source does not have to be officially registered with the EU. The name and location of the source and the same trade description must always appear on the label. If the trade description of the Spring Water is different from just the name or location of the source, then either the name or the location of the source must be printed in letters at least one and a half times larger than any part of the trade description. Because there is no official list of Spring Water sources, the bottler may change the name of the Spring Water at any time,

but only one name may be used at any one time. For a Spring Water, the sales description is Spring Water with any reasonable qualifier such as “sparkling” or “carbonated”. It should not include the words “natural” or "mineral" in order to prevent possible confusion with Natural Mineral Water.

3) Bottled Drinking Water (table water)

The legal name of the product is “water”. The law requires the name to be sufficiently precise to inform the purchaser of the true nature of the food and to enable the food to be distinguished from products with which it could be confused and can include a description of its use. The names “table water” or “bottled drinking water” are sometimes used. There is a general requirement that the consumer should not be misled, and that there should be no confusion with any natural mineral water or spring water.⁷⁰

Other mandatory information on the labels of bottled waters includes the analytical composition (compulsory for natural mineral water, optional for spring waters), information on treatments - if any -, place of exploitation).

1. Composition: a statement of analytical composition is mandatory only for Natural Mineral Waters. Bottled Drinking Waters and Spring Waters may not always have a stable enough composition to give a representative analysis, but often do. A remineralized bottled drinking water will normally have a stable composition by design.
2. Place: place of exploitation for Natural Mineral Waters or Spring Waters or origin in general regulations for other waters.
3. Traceability: the requirement to name the source, the packer and the lot mark means that a bottle of water is fully traceable to its origins and the day, even precise time, of bottling can be identified as added reassurance for consumers.

⁷⁰ <http://www.efbw.org/>

Other mandatory information on the labels of bottled waters includes the analytical composition (compulsory for natural mineral water, optional for spring waters), information on treatments - if any -, place of exploitation).

4. The lot or batch mark: provides a useful source of identification to enable product identification along the whole food chain. The size of the batch is for the packer to determine but, for waters, typically represents a day's production. Each container produced must carry a batch mark. The mark must be easily visible, clearly legible and indelible. The customer need not understand the meaning of the mark but must be able to distinguish it from other information on the label. A lot or batch mark is not required if an indication of minimum durability or "Best Before" date is used which includes the day as well as the month and year.
5. Best Before: the words "Best Before" followed by a date up to and including that which the drink can reasonably be expected to retain its specific properties, if properly stored, together with any special storage instructions should be clearly stated. The date may be expressed in terms of a month and year only for drinks expected to retain their specific properties for more than three months and if the words "Best Before End" are used. For drinks retaining specific properties for over 18 months the year only is sufficient if the words "Best Before End" are used. The date may be separate from the words "Best Before" or "Best Before End" if the words are followed by a reference to the place where the date appears. Bottle labels often advise that products should be stored in a cool, dry, non-odorous place away from direct sunlight.
6. Volume of package: the volume must be marked in letters of a certain size.
7. Instructions for use and storage: instruction for use and storage would be included on the label where necessary. Labels often advise consumers to store bottles in clean, cool and dry places.
8. Origin: name or business name and address of packer, manufacturer or seller in the EU must be marked on the pack. The country of origin should be clear.
9. Nutrition labelling: bottled waters are exempt from mandatory nutrition labelling.

2.5 Environmental impacts

Like any other industrial activity, bottled water is not completely innocuous to the environment. On the one hand, quality standards and controls as well as spring protection could help better protecting water quality at a larger scale. The choice of packaging materials increasingly considers environmental parameters. On the other hand, manufacturing, recycling or incinerating bottles of water implies energy needs and some outlets in air and water of polluting particles. Transporting bottled water throughout the world also implies energy needs as well as fuel combustion.

Protecting and preserving the environment has always been a core objective for the bottled water industry. European producers of natural mineral and spring waters have been safeguarding water sources and the surrounding ecosystems to ensure the waters' quantity and quality will be guaranteed for future generations.

Bottled water has a low environmental footprint, and yet water bottlers are as committed as ever to improving their environmental performance. Through the years, considerable improvements have been achieved through carbon and water reduction, minimizing packaging materials, and optimizing transport logistics.⁷¹

Bottled water, like any other industries, is not exempt of environmental impacts, either positive or negative. Natural mineral water and other bottled waters, as well as regular drinking water, must meet strict quality requirements. However, this doesn't necessarily imply an improvement in general water quality: natural mineral water springs are indeed protected against pollution hazards, but this has an impact on a limited area; purified bottled water doesn't need extremely good quality water prior to being treated, although this could reduce treatment loads and costs. Protection areas are often established around water abstraction points, locally protecting the environment.

The choice of bottled water packaging material is increasingly done taking into account environmental considerations. PET is increasingly chosen because of its properties: it is

⁷¹ <http://www.efbw.org/>

light, easy to work on and very transparent. It can be re-manufactured into many different products, such as fibers for the clothing industry. When burnt, it doesn't release chlorine into the atmosphere, contrary to PVC, whatever type of incinerator is used. Negative environmental impacts, in particular energy consumption, are reduced if PET, aluminum and glass packages are washed and re-filled rather than re-manufactured. Emerging and developing countries may not have the necessary infrastructure to incinerate or recycle the bottles.

Trading and transporting bottled water all over the world also has an important environmental impact, in particular on atmospheric pollution and climate change because of fuel combustion. This impact varies a lot depending on many factors, i.e.: the type of transport used (train vs. old trucks), the type of fuel used (electricity vs. diesel), the distance to travel, etc.

Considering current market trends, transport of bottled water should keep growing. Drinking bottled water has become a trivial habit in many people's lives. Bottled water may even be necessary, for instance in case of temporary tap water contamination. Whatever the reasons, the trend towards consuming bottled water will keep increasing in the coming years.⁷²

⁷² C. Ferrier, *Bottled water: understanding a social phenomenon*, cit., pp. 4-5.

CHAPTER III

BOTTLED WATER MARKET IN CHINA

3.1 Beverage market in China

Before talk about the beverage market, it is first necessary to introduce what is the food and beverages (F&B) industry, of which nonalcoholic beverages are part: water is one of these.

The food and beverages industry regard all companies involved in processing raw food materials, packaging, and distributing them. This includes fresh, prepared foods as well as packaged foods, and alcoholic and nonalcoholic beverages. Any product meant for human consumption, aside from pharmaceuticals, passes through this industry.⁷³

China's beverage market has experienced considerable growth over the past several years: its size has led multinationals to consider China as an essential market in their strategies. Profits and rewards in the beverage industry are very high.

Since 1979, the beverage industry has been through three distinct periods, each marked by the introduction of new beverage products: carbonated beverages were the first to be introduced in China, such as Coca-Cola & Pepsi; then bottles of water emerged with the rise of large groups like *Wahaha* 娃哈哈 and *Nongfu shangquan* 农夫山泉; since 2001, *Master Kong* tea and fruit juices have become the trend.⁷⁴ During the 2015 the revenue

⁷³ <https://globaledge.msu.edu/industries/food-and-beverage/memo>

⁷⁴ <http://daxueconsulting.com/beverage-market-in-china/>

rate was over 30% despite the high segmentation and competition in the Chinese market, but the beverage market in China was expected to become the biggest worldwide. In China, the consumption level of soft drinks was one of the lowest in the world and tap water wasn't potable. The potential growth of the beverage industry in China was, as a result, amongst the highest worldwide.

In 2016 the National Bureau of Statistics reported that domestic beverage industry sales had increased by 10.5% in 2016. While each beverage category will present different challenges and opportunities, it is clear that there are emerging trends in Chinese consumer lifestyle which were helping shape the market.⁷⁵

With a population of over 1.3 billion, China has emerged as the world's largest consumer market for F&B, surpassing the United States. This makes the Chinese market increasingly appealing for foreign brands, especially as Chinese consumer behavior shifts.

Growth of imported F&B products is driven by rising disposable incomes, limited arable land, water scarcity issues, urbanization, improving logistics systems, growing concerns for food safety, the depreciation of the euro versus the Chinese yuan, as well as a growing taste for foreign foodstuffs.⁷⁶

A key growth driver in the Chinese economy has been the rapid rise in average household incomes. Over the past ten years, China has experienced an average GDP growth of approximately 10%, which has created a new middle-income group with much higher disposable incomes. In addition, Chinese urban populations have increased by an estimated 153 million over the past ten years (2005-2015); by 2025, it is expected that urban areas will grow from 607 million to 822 million people.⁷⁷

⁷⁵ <https://www.figlobal.com/fi-asia-china/visit/news-and-updates/beverage-market-china>

⁷⁶ EUSME CENTRE, Report: *The Food & Beverage Market in China*, https://d298t4b8zskb44.cloudfront.net/media/bic/knowledge_base/documents/CFDR.pdf

⁷⁷ USDA China Retail Report 2014, https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Retail%20Foods_Chengdu%20ATO_China%20-%20Peoples%20Republic%20of_12-31-2014.pdf

At the same time, rapid developments in transportation (including major rail improvements and road arteries) are expanding the economic potential of second- and third-tier cities. In terms of F&B, infrastructure improvements are speeding up distribution times, efficiency and costs, thereby stimulating local economies by raising consumer demand for higher value products. Due to China's rapid urbanization, the number of urban residents is expected to reach one billion by 2030. Urban residents' steady consumption growth of basic ingredients over the last 20 years reflects the rising proportion of income spent on food and eating out.

Other key growth drivers for the F&B sector include the trends:

- **Healthy choices:** Chinese consumers are among the world's most health-conscious due to rapid growth and considerable lifestyle changes. Consumers are seeking an active lifestyle and physical health, but they are also aspiring to improved mental wellbeing. In all markets they are seeking products to make them feel and look healthy and happy, to the point where 73% of consumers are willing to pay more for products which are deemed healthier. China is the biggest market in the Asia Pacific region for carbonated soft drinks (CSD), but consumption volume per capita is still lower than that in developed countries, and the compounded annual rate of growth is below average. Alongside healthier food and drink choices, Chinese consumers are also pursuing a more active lifestyle. As a result, the sports and energy drink market in China shows great potential. Average growth value over the past five years has been promising, and brands are marketing to regular consumers, rather than just specialized athletes.⁷⁸
- **Dining out:** in China, imported F&B products are generally consumed in bars, café, restaurants and hotels in urban settings, and Chinese consumers are increasingly choosing 'Western food' when they dine out. Many Western-style restaurants that were originally targeted at expatriates now have predominantly Chinese clientele, and generic Western-style chain restaurants are widespread.

⁷⁸ <https://www.figlobal.com/fi-asia-china/visit/news-and-updates/beverage-market-china>

Food delivery, eating out, and the majority of goods bought at convenience stores are for consuming outside of the home. Between 2013 and 2016 online-to-offline food delivery⁷⁹ increased by 40% to 50%, which has shaped the food industry with many more brands concentrating on online sales. Beverages, however, have relatively low online penetration which indicates that they are not as suited to this platform.

Beverages sold at convenience stores have a higher rate of out-of-home consumption which has promoted many organizations to adapt packaging and branding to appeal to on-the-go consumption. Hypermarkets cater to a different market as beverages bought here are for home consumption, meaning there are greater opportunities for offering bulk packaging.⁸⁰

- Online shopping: online shopping in China is not only about buying things consumers need or want but also about information sharing, communicating and a keeping up with trends. E-commerce is not necessarily bad news for brick-and-mortar stores since consumers seek more than just ‘products’ when they shop; instead, they want and expect a more integrated and personalized experience.
- Social Media: China has a ‘fan economy’ which largely plays out on social media with the millennial market. Beverage brands have begun to recognize the value of social media marketing to communicate directly with this demographic. Online campaigns largely consist of promoting the experience of a beverage or inviting the consumer to be a part of the company’s process.
- Gifts & Packaging: imported food and beverages remain a status symbol in China, perceived as having higher value than Chinese goods. These products are often used for display purposes rather than for consumption. As a result, branding and packaging are extremely important.

⁷⁹ Online-to-offline (O2O) commerce is a business strategy designed to bring online customers to brick and mortar locations as well as create a seamless digital experience before, during, and after.

⁸⁰ <https://www.figlobal.com/fi-asia-china/visit/news-and-updates/beverage-market-china>

- Food safety scandal⁸¹: China has repeatedly been hit by food safety scandals over the past few years, including contaminated milk, recycled cooking oil, eggs and animal feed and the selling of diseased pigs. These scandals have damaged confidence and trust in food production processes and standards. Consumers of imported food in China are generally upper- or middle-income locals and expatriates. These consumers can afford higher prices for food and are motivated to do so because of increasing concerns about food safety and health. Imported Western-style products have a good reputation for being high quality and for being nutritious and safe.

Food consumption patterns in China have changed significantly with improved standards of living. More consumers are exposed to a greater diversity of consumer products, both locally and when travelling abroad. Chinese consumers are increasingly discerning, and many now seek the following qualities when making purchases:

- Confidence in food safety and ingredients' integrity*
- High quality*
- Excellent nutritional value
- Better lifestyle through a variety of food and beverages
- Modern packaging
- Freshness
- Convenience^{82 83}

⁸¹ <https://www.telegraph.co.uk/news/worldnews/asia/china/8476080/Top-10-Chinese-Food-Scandals.html>

⁸² http://cn.chinagate.cn/economics/2015-04/08/content_35265734.htm

⁸³ USDA China Retail Report 2014,
http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Retail%20Foods_Chengdu%20ATO_China%20-%20People%20s%20Republic%20of_12-31-2014.pdf

*Confidence in food safety, ingredients' integrity and high quality products are the key reasons that Chinese consumers purchase imported F&B products. As a result, many mainland consumers are choosing safe, pollution-free, quality food items. Moreover, with increased spending power, consumers have shown a higher demand for F&B products imported from overseas. These reasons far outweigh other factors, such as better nutritional value, better lifestyle through more variety, modern packaging, freshness and convenience.

Companies that operate in the Chinese F&B market have significant opportunities to grow.

The China Shopper Report 2017⁸⁴ offers a useful method for re-thinking strategy in the Chinese beverage market. Chinese consumption operates at two speeds; fast and slow. In order to successfully operate in this market, companies need to work simultaneously in both streams. For example, an established brand has an opportunity to create a premium range for white-collar shoppers, while raising prices of their traditional mass product which is targeted at blue-collar consumers to make up for the falling sales at this level. By working on both streams concurrently there is greater room for innovation and sustained value growth.

There are various opportunities for the beverage market to operate in China at two speeds, with the potential to add premium products with reduced sugar, more natural ingredients, limited editions, and unique flavors or flavor combinations.

With a change in the eating and drinking habits of Chinese consumers, brands need to adjust their beverage offer depending on the context they are selling in. As convenience stores increasingly show a consumer preference for on-the-go products, beverage presentation and packaging can address these needs. Convenience store customers are also a key segment of health-conscious consumers who are purchasing healthier food and

⁸⁴ <https://www.bain.com/insights/china-shopper-report-2017-chinas-two-speed-growth-in-and-out-of-the-home>

beverages. If operating on a two streams system, brands can target their premium, healthier options to these stores.

As eating outside of the home increases in popularity, there is also an opportunity for brands to sell directly to restaurants and focus their attention on business to business retailing and marketing.

Digital trends to communicate the experience of a brand is significant among millennial consumers. In order to target this market, brands can invest in visual branding and social media campaigns. Innovative marketing campaigns are best played out on social media as they help create buzz and excitement around a product. There are opportunities for international beverage brands to partake in China's digital and fan culture.

Chinese consumers are becoming more health-conscious and are showing an interest in less processed ingredients, which has increased the demand for more natural ingredients. This opens up opportunities to create beverages with more natural flavors, particularly with more locally sourced ingredients. Local flavors are particularly popular in concentrates and mixes, and appeal to the tastes of individual countries, while providing opportunities to utilize local produce. When utilizing more natural ingredients and flavors, the benefits should to be considered and clearly marketed to appeal to health-conscious Chinese consumers.⁸⁵

3.2 Bottled water market

China is the second-largest economy in the world after the United States, and its economy will continue to grow through 2020, although at a slower rate than in previous years. In addition, China has the largest population in the world, and its population will continue to grow over the next few years, reaching over 1.4 billion people by 2020.⁸⁶ But, as the

⁸⁵ <https://www.figlobal.com/fi-asia-china/visit/news-and-updates/beverage-market-china>

⁸⁶ Euromonitor International, 2016; <https://www.euromonitor.com>

second largest economy in the world, and a major driver of global economic development, China has paid a high environmental price for its economic increase: polluted air, contaminated land, uninhabitable areas, desertification, and a severe crisis of drinking water. The market that directly shows the impact of these environmental issues is exactly the bottled water market.

The country only has about 6.5% of the planet's renewable water resources to sustain one-fifth of the world's population. Due to the economic growth, faster than freshwater supply, China's water shortage has become a much more severe problem. The *WHO (World Health Organization)* warned that although China is ranked sixth regarding the total volume of fresh water available worldwide, the amount of fresh water available per capita in China is only a quarter of the global average.⁸⁷ A survey conducted by the China Water Supply Services Union in 2014 – with 30,000 urban residents in 100 cities – showed 59% of them drinking (boiled) tap water. The remaining participants prefer bottled water as the first choice over a home water filtration system. In 2016, after Huangpu River's contamination scandal in the previous years⁸⁸, the Ministry of Water Resources (MWR) in China declared four-fifths of groundwater contaminated, which means it is unfit for drinking or daily use. A survey conducted by the China Water Supply Services Union in 2014 – with 30,000 urban residents in 100 cities – showed 59% of them drinking (boiled) tap water. The remaining participants prefer bottled water as the first choice over a home water filtration system. Thus, the rapid growth in the water market results in a mistrust over water safety.

As Chinese consumers continue to worry about water safety, the growing economy and population could continue to have a positive effect on bottled water sales in the years. Research has shown an enormous growth in the bottled water market segment. In 2013, China surpassed America, becoming the world's biggest bottled water market by volume; in 2014, the country accounted for over half of the total bottled water sales in the Asia-Pacific region, with a total retail sales value of US\$18.5 billion. Consumption of bottled

⁸⁷ <http://daxueconsulting.com/bottled-water-market-in-china/>

⁸⁸ <https://www.theguardian.com/environment/chinas-choice/2014/apr/17/china-water>

water in China increased steadily between 2010 and 2014 as consumers have been drinking bottled water for hygiene and safety reasons and all factors we already seen. In 2015, China was the largest bottled water market worldwide with US\$16.4 billion worth of retail value sales. In that same year, China imported US\$410.9 millions of bottled water. Analysts anticipate an annual growth rate of between 5% and 12 % between 2015 and 2025.

Statistics show China is among the world's 13 thirstiest countries. As a country with the largest population, about 400 from 699 cities are short of water, threatening the daily consumption of more than 30 million citizens and causing annual economic losses of more than US\$ 14.5 billion.

The government is taking reasonable measures, one of them was to invest US\$ 87 billion in environmental protection programs focusing on water, drinking water and air pollution control. We could optimistically expect a great improvement of China's water treatment industry in the near future.

There are a lot of active Chinese companies in the field of water and water treatment or drinking water, this number has been increasing and is expected to increase further. This is an emerging environmental industry where China is opening its environmental protection industries to overseas investors and expects the sector to grow at an annual rate of 14-17% in the following years. It is expected to reach 49 million tons of total annual consumption by 2020. China is the world's biggest bottled water market in terms of increasing.⁸⁹

The increasing thirst for quality water and health-conscious drinking habits will mean that China retains its position as the world's biggest bottled water market to 2021, according to GlobalData, a leading data and analytics company.⁹⁰

⁸⁹ <http://ecommercechinaagency.com/bottled-water-chinese-beverage-market/>

⁹⁰ <https://www.globaldata.com>

Growth in disposable income is expected to help the country's bottled water market stay ahead of major nations like the US, India, Indonesia and Germany, in terms of volume.

During 2016-2021, GlobalData expects China's bottled water market to expand at a Compound Annual Growth Rate (CAGR) of 7.42% and lead the global market with 57,903.90 million litres expected to be consumed in 2021 alone.

Per capita consumption of bottled water has been on a steady upswing, from 23.6 litres in 2013 to 29 litres in 2016, and is expected to further rise to 30.8 litres in 2017. This consumption pattern is propelled by the improving quality and fast pace of life, which can be seen to steer consumers towards the use of bottled water over barrels of water. This trend is more evident in urban areas where 57.4% of the population resides. Moreover, the quality of tap water in much of China is not high enough to drink.

“Growing purchasing power has seen consumers spending more on high-end products. Factors such as exposure to brands and large-scale marketing have served to tip the scales in favor of premium bottled water.”

This segment has witnessed a huge surge in the last few years – jumping from a meagre 45.7 million litres in 2013 to a whopping 520.6 million litres in 2015.

GlobalData has also found that 74% of Chinese consumers pay more attention to packaging materials and capacity when choosing food and beverages, noticeably higher than the global average of 51% of consumers.⁹¹

“Packaging is essential to the perception of consumer satisfaction. Trends show that glass packaging, small packages and PET material will have a decisive impact on purchasing choices in China.”

Ellen Rivers, Consumer Analyst at GlobalData.

⁹¹ *China will remain world's largest bottled water market to 2021*; December 11, 2017.
<https://www.globaldata.com/china-will-remain-worlds-largest-bottled-water-market-2021-says-globaldata/>

3.2.1 The rise of bottled water

China is among the first consumers of bottled water globally, but how everything started? For many in China, drinking water is synonymous with drinking bottled water. Grabbing a bottle of water at a convenience store is a normal way of life. But this was not the case 20 years ago.



Although China's first bottled water brand, *Laoshan Mineral Water* can be traced back to a century ago, the bottled water market only really took off in 1996 when local brand *Wahaha* launched a joint venture company Hangzhou Wahaha Beverages Co. Ltd with French food & beverage group Danone, and officially entered the bottled water market.

According to the International Bottled Water Association (IBWA), China's bottled water consumption has exploded from a mere 2.8 million m³ in 1997 to 39.5 million m³ in 2013, growing faster at a CAGR of 18.1% compared to the global average of 7.8% (see chart below). Indeed, the industry's growth has been nearly double that of China's GDP growth for the same period in terms of CAGR.

China's bottled water market for the last two decades has moved in tandem with China's overall economic growth. During the same period, China's water quality has been rapidly deteriorating due to increasing water pollution from rampant industrial wastewater discharge, as well as increased municipal wastewater from urbanization. With bottled

water providing a self-proclaimed alternative to tap water, China embraced bottled water causing sales in bottled water to double over the last five years.

Naturally, this booming market has attracted both domestic and foreign investments from various industries. Nestlé, Danone and Coca-Cola poured money in through sole or joint venture investments over the past ten years while domestic brands such as *Laoshan*, *Nongfu Spring*, *C'estbon* (China Resources), *Hengda Ice Spring* (Evergrande) gained first-mover advantage as market leaders. These are all still expanding their production.⁹²

3.2.2 Market size

As Chinese consumers pursue a healthy path, bottled water has become an active market segment. Overall, local brands dominate the mass market, with the top 5 brands accounting for 70% of the market. But in the high-end segment, imported brands are those which dominate.⁹³

At present, packaged drinking water ranks first in the national beverage market with its 40% market share.

In 2014, China's packaging drinking water production was 78.161.400 million tons; the total sales of packaging drinking water reached 113.1 billion yuan. From 2013, there were more than thousands production enterprises in the mineral water industry, ranking first in the world, with an annual mining volume of more than 13 million tons.

From January to December 2015, the national packaged drinking water production became 87.600.900 tons. Among them, Guangdong packaging drinking water production was 14.466.000 tons, accounting for about 17% of the national packaged drinking water production, becoming the country with the highest packaging drinking water production.

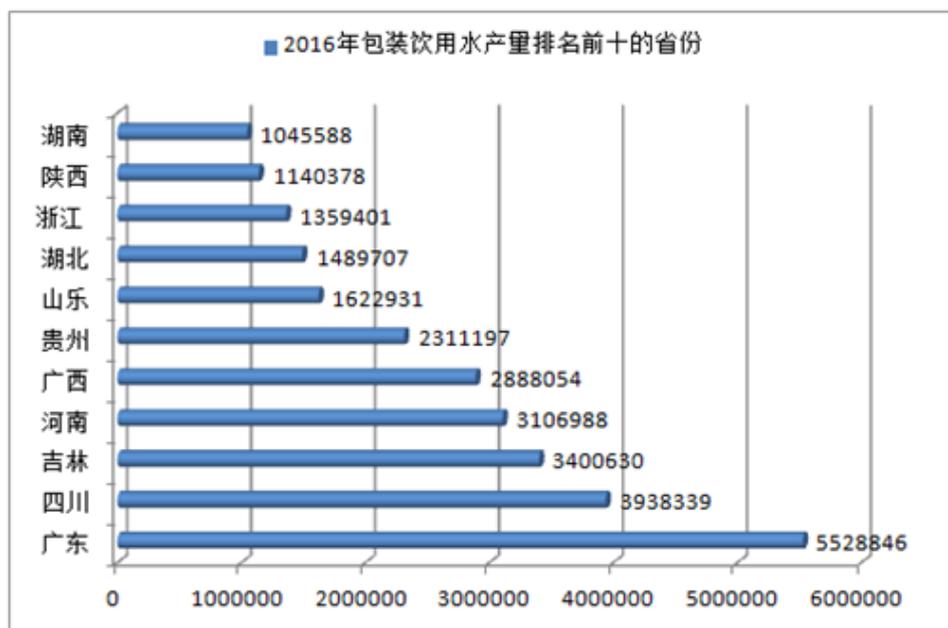
⁹² *Ibidem*

⁹³ 中商情报网, <http://www.askci.com/news/chanye/20171128/153603112867.shtml>

In addition, the top ten provinces and cities for packaging drinking water production in 2015 were Guangdong (14.466.200 million tons), Sichuan (8.768.900 tons), Jilin (8.547.000 tons), Guangxi (6.871.500 tons), Henan (6.544.600 tons), Shandong (5.437.200 tons), Guizhou (3.284.800 tons), Hunan (3.221.300 tons), Hubei (3.113.600 tons) and Zhejiang (2.541.900 tons).

The national packaged drinking water production for the first five months of 2016 was 36,083,888 tons. Among them, Guangdong ranked first in the national packaging drinking water production with a production of 5,528,846 tons.

The following chart presents the top 10 provinces for packaging drinking water production in 2016 (from the lower to the higher output measured in tons).



Source: 公开数据整理 (public data), <http://www.chinaidr.com/tradenews/2017-07/113958.html>

Looking at the table we can observe how, from 2015 to 2016, the most performing provinces in terms of production were almost the same. Guangdong was ranked again as first (5528846 tons), followed respectively by Sichuan, Jilin; Henan and Guangxi exchanged their positions, the same happened for Guizhou and Shandong, then followed by Hebei, Zhejiang, Shanxi and Henan.

Revenue in the Bottled Water industry amounts to US\$42,774M in 2018. The bottled water market is a market whose sales and consumption have exploded in just twenty years. Nowadays, Chinese industry exceeds that of the United States in terms of consumption and those for several reasons that we will evoke through the article. The penetration of bottled water in China now stands at a rate of 15%, the market is still a great opportunity for the players who wish to expand there. The industry consumes more than 69 billion liters in volume and a turnover in the value of more than 90 billion yuan.⁹⁴

3.2.3 Water regulatory framework in China

Since 1949, considerable progress has been made in the development of water policies and regulations. The rollout of a significant number of water policies and regulations over time has resulted in an increasingly sophisticated legal framework on water resources. China has so far managed to put in place a fairly robust water law system that consists of, among others, 4 pieces of legislation, 19 pieces of administrative regulations, 55 ministerial rules and 700 or so sub- national regulations and government rules.⁹⁵

Article 9 of the Constitution of the People’s Republic of China states that all the waters of China are “owned by the state, that is, by the whole people.”⁹⁶ It adds that the state is responsible for ensuring the rational use of natural resources and no organization or individual can appropriate or damage any natural resource.⁹⁷

⁹⁴ <https://www.marketingtochina.com/guide-market-brand-bottled-water-china/>

⁹⁵ *Water Policies, Laws and Regulations in China*, Ministry of Water Resources, People’s Republic of China, <http://www.mwr.gov.cn/english/mainsubjects/201604/P020160406508815936744.pdf>

⁹⁶ Adopted at the Second Session of the Ninth National People’s Congress and Promulgated for Implementation by the Proclamation of the National People’s Congress on March 15, 1999.

⁹⁷ *Regulatory Frameworks for Water Resources Management: A Comparative Study*, Salman M. A. Salman and Daniel D. Bradlow, The World Bank, May 2006, p. 36.

Water resources in China are regulated by the Water Law of the People's Republic of China (the Water Law).⁹⁸ There are also a number of other statutes that are relevant to water regulation and use in China. They are:

- Environmental Protection Law of the People's Republic of China;⁹⁹
- Fisheries Law of the People's Republic of China;¹⁰⁰
- Agriculture Law of the People's Republic of China;¹⁰¹
- Water and Soil Conservation Law of the People's Republic of China;¹⁰²
- Flood Control Law of the People's Republic of China¹⁰³ (the Flood Control Law);
- Prevention and Control of Water Pollution Law of the People's Republic of China¹⁰⁴ (the Water Pollution Law).

The purpose of the Water Law is to promote the development, sustainable use, management, and protection of the water resources of China in a way that contributes to economic and social development in China (Water Law, art. 1).¹⁰⁵

⁹⁸ Adopted at the 29th Session of the Standing Committee of the Ninth National People's Congress on August 29, 2002. This law replaced the Water Law of 1988.

⁹⁹ Adopted by the National People's Congress on December 26, 1989.

¹⁰⁰ Adopted at the 14th Meeting of the Standing Committee of the National People's Congress and Promulgated by Order No. 34 of the President of the People's Republic of China on January 20, 1986, and effective as of July 1, 1986.

¹⁰¹ Adopted at the Second Meeting of the Standing Committee of the Eighth National People's Congress on July 2, 1993, promulgated by Order No. 6 of the President of the People's Republic of China on July 2, 1993, and effective as of July 2, 1993.

¹⁰² Adopted at the 20th Meeting of the Standing Committee of the Seventh National People's Congress of the People's Republic of China on June 29, 1991, and promulgated by Order No. 49 of the President of the People's Republic of China and effective as of June 29, 1991.

¹⁰³ Adopted at the 27th Meeting of the Standing Committee of the Eighth National People's Congress and Promulgated by Order No. 88 of the President of the People's Republic of China on August 29, 1977.

¹⁰⁴ Adopted on May 11, 1984 and amended on May 15, 1996.

¹⁰⁵ Salaman and Bradlow, *Ibidem*, p.37.

The water resources of China include both surface and groundwater (art. 2). All water resources are owned by the State (art. 3). The State Council exercises the rights of ownership on behalf of the State (art. 3). Any organization or individual who uses water must do so in a way that does not infringe on the public interest or the lawful rights and interests of other people (art. 28).

These objectives must be achieved through comprehensive planning, with all factors taken into account and with an emphasis on using water for multiple purposes and on obtaining maximum benefits from the water used (Water Law, art. 4). In furtherance of these objectives, the Water Law requires the State to formulate a strategic plan for national water resources that provides for the use, protection, and management of water on the basis of river basins and regions (art. 14).

The development and use of water resources must conform to the principles of promoting benefits while avoiding disasters; balancing the interests of both upstream and downstream areas and of all affected regions; promoting multiple benefits from water resources; and flood prevention (art. 20). They should also follow the principle of the unified treatment and development of surface and groundwater (art. 23). The Water Law stipulates priorities in water uses: The highest priority is assigned to the domestic needs of both urban and rural inhabitants. This is followed by, in descending order, the needs of agriculture, industry, environment, and navigation (art. 21).¹⁰⁶

Regarding bottled water, on the 31st of Dec 2014 the National Health and Family Planning Commission of the People's Republic of China (NHFPC) released the national standard GB 19298-2014 Packaged Drinking Water which became effective on 24 May 2015 (Chemical Inspection and Regulation Service, 2015¹⁰⁷). The standard replaced two outdated standards, GB 19298-2003 Hygienic Standard of Bottled Water for Drinking

¹⁰⁶ *Ibidem*, pp. 37-38.

¹⁰⁷ Chemical Inspection and Regulation Service, 2015, Article: New Hygienic Standard of Packaged Drinking Water, retrieved April 2015 from: http://www.cirs-reach.com/news/New_Hygienic_Standard_of_Packaged_Drinking_Water.html

and GB 17323-1998 Bottled Purified Water, and became the first unified standard governing China's packaged drinking water.

There are two main raw water sources for packaged drinking water:

- Public water supply systems
- Non-public (namely surface or ground water) supply systems

There are clear requirements in the new standard that are applicable to packaged water products originating from both of these sources. Labels such as, "this product includes food additive for taste adjustment", should be placed close to the product name on the label. This requirement applies to additives such as magnesium sulfate, zinc sulfate, calcium chloride, potassium chloride and other additives used during the production process.

To meet the requirements of the new standard, the name given to a packaged drinking water product should be scientifically correct. It is not permissible to name a product by one, or several, ingredients, except for water. The misleading practice of using creative marketing descriptions for aquatic products will be regulated.¹⁰⁸

As part of its efforts to move forward the development of water policies and legislation, China has consistently taken care to learn from and draw upon international lessons and achievements in enacting water legislation. Over the course of the development and amendment of the *Water Law* and other regulations, international cooperation and interaction have enabled the country to learn and incorporate numerous state-of-the-art international management philosophies and regulatory regimes. The legislative approach and lessons of other countries have served as a useful reference for China's adoption of a series of statutory arrangements including water right, water extraction licensing and a

¹⁰⁸ For further information about standards which regulate bottled drinking water: GBT 10789-2015 General Standard for Beverage, issued by General Administration of Supervision, Inspections and Quarantine of the People's Republic of China and China National Standardization Management Committee.

legal system that mandates the combination of basin-specific water resources management and administrative region-based water resources management.¹⁰⁹

3.2.4 Chinese brands

In 1987, China issued for the first time the national standard of drinkable natural mineral water GB8537-87¹¹⁰. Thanks to the adoption of this standard, the bottled water industry begins to develop very quickly and in 1989, another national standard—the assortments of soft drinks GB10789-89¹¹¹ was made public. Bottled water was listed as one of the eight assortments of beverages. In 1990's, with the raising of the Chinese standard of living, the demand for bottled water increased rapidly by 20% annually. By 1994, there were about 100 bottled water enterprises with output of 3million tons.

The table below shows the top 5 bottle water company shares in China from 2012 to 2015, with the retail sales share expressed by volume in percentage. We can observe how the company *Nongfu Spring Ltd.* who had stable percentages of sales in 2012, 2013 and 2014, became the leading bottle water company in 2015 with a 20%.

Companies	2012	2013	2014	2015
Nongfu Spring Ltd.	11.8	11.7	11.5	20.1
Tingyi Holdings Ltd.	17.8	17.5	17.2	16.9
Hangzhou Wahaha Group Co., Ltd.	16.6	16.3	13.2	14.7
China Resources Enterprise Limited	4.3	4.6	9.6	10.4
The Coca-Cola Company	5.2	4.9	4.9	5.6

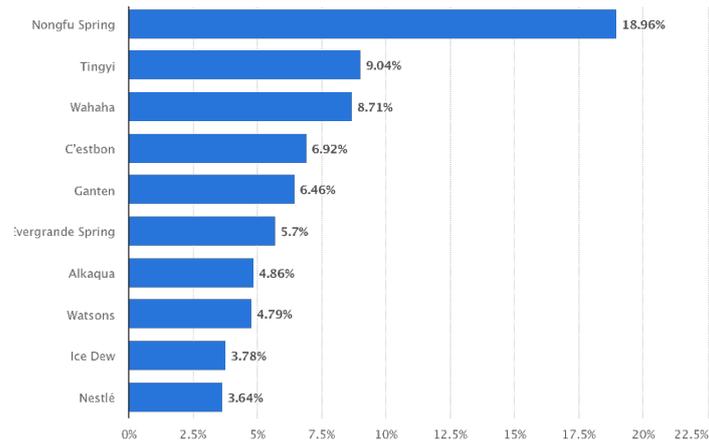
Source: Mintel Market Sizes, 2016

The statistic below presents again the market share of the leading bottled water brands in China but in 2016. That year, *Nongfu Spring's* drinking water once again led the Chinese bottled water market with a share of almost 19 percent.

¹⁰⁹ *Water Policies, Laws and Regulations in China*, Ministry of Water Resources, People's Republic of China.

¹¹⁰ <https://archive.org/details/gb.8537.c.2008>

¹¹¹ <https://www.chinesestandard.net/PDF.aspx/GBT10789-2015>



Source: <https://www.statista.com>

Today, as reported by Fine Waters, active Chinese bottled water brands are more than 60¹¹², but here we'll analyze three leader brands of the water market in China: *Wahaha*, *Nongfu Spring* and *C'estbon*.

¹¹² <http://www.finewaters.com/bottled-waters-of-the-world/china>

娃哈哈
Wahaha



Founded in 1987, Hangzhou Wahaha Group (in Chinese *Wahaha* is the sound of laughter) started from three people and 140,000 yuan. Under the leadership of the founder Zong Qinghou, it has developed into a large and profitable beverage company in China, and its beverage production ranks among the top in the world. It has nearly 80 production bases and more than 180 subsidiaries in 29 provinces, municipalities and autonomous regions across the country, and has 30,000 employees. The products mainly cover more than 190 varieties of protein beverages, packaged drinking water, carbonated beverages, tea beverages, fruit and vegetable juice beverages, coffee beverages, plant beverages, special-purpose beverages, canned foods, dairy products, medical and health foods, etc. The production and sales of drinking water, milk-containing beverages, and eight-treasure rice porridge have been among the highest in the country for many

years.¹¹³ Hangzhou Wahaha Group Co., Ltd. is one of the top 500 companies in China. In 2016, the company achieved operating income of 45.6 billion yuan, a decrease of 7.84% from the previous year of 49.5 billion yuan.

In the following chart we can observe operating income statistics of Hangzhou Wahaha Group Co., Ltd (expressed in hundred million yuan) in the period 2013-2016.



Source: <http://www.askci.com/news/chanye/20171128/153603112867.shtml>

¹¹³ <https://www.wahaha.com.cn/news/155>

Nongfu Spring Co., Ltd. - 农夫山泉



Nongfu Springs Co., Ltd., established in 1996, is located in Hangzhou, Zhejiang Province. The company is one of China's leading bottled water supplier, producing high quality natural drinking waters, vegetable and fruit juices, functional beverages, tea beverages and other natural soft drinks. The company has eight high-quality water source bases: Thousand-Island Lake (Zhejiang Province), Zhejiang Qiandao Lake, Changbai Mountain (Jilin Province), Danjiangkou (Hubei Province), Wanlv Lake (Guangdong Province), Mount Taibai (Shaanxi Province), Manas of Mountain Tianshan (Xinjiang Province), Mount Emei (Sichuan Province), and Wuling Mountain (Guizhou Province). The products operated by Nongfu Spring Co., Ltd. mainly include Nongfu Spring bottled water, but they produce also other popular brands including Farmer's Orchard, Scream, Water Soluble C100, Victory, Oriental Leaf, Whisked Milk Tea and Tea π.

Among them, Nongfu Spring uses natural high-quality water source to make minimal and necessary treatment on raw water, and preserves mineral elements such as potassium, sodium, calcium and magnesium which are beneficial to human body. The pH value is 7.3 ± 0.5 . It is naturally weakly alkaline and suitable for long-term drinking.¹¹⁴

Nongfu Springs Co., Ltd. is one of the top 20 beverages in China and is one of the top 500 companies in China. In 2016, the company achieved operating income of 14.1 billion yuan, an increase of 29.58% over the previous year of 10.9 billion yuan.

In the following chart we can observe operating income statistics of Nongfu Spring Co., Ltd. (expressed in hundred million yuan) in the period 2013-2016.



Source: <http://www.askci.com/news/chanye/20171128/153603112867.shtml>

¹¹⁴ <https://www.nongfuspring.global> , <http://www.nongfuspring.com>



Headquartered in Shenzhen High-Tech Industrial Park (North), China Resources C'estbon Beverage (China) Co., Ltd. (hereinafter referred to as "China Resources C'estbon") is subordinate to China Resources Beer (Holdings) Co., Ltd. under China Resources Group. In 1990, China Resources C'estbon firstly launched purified water in China and became one of the earliest professional producers of packaged drinking water, with "C'estbon" series packaged drinking water as its main products. The Company is dedicated to bringing quality products and sincere services for every consumer, pursuing excellent management, creating perfect quality and offering sincere services with food safety as the basis and customer satisfaction as the goal. The company always adheres to its brand's spirit of providing the consumers healthy and stylish life experience.

China Resources C'estbon is also one of the main initiators and drafters of the national standard of Bottled Drinking Water. The company always provides healthy, satisfactory and high-quality products for consumers in line with the production standard higher than the "national standard", and has won the

recognition of consumers by virtue of good services. Over the years, it has been certified as Famous Chinese Trademark, The Most Competitive Brand, Famous Trademark of Guangdong Province and Well-Known Brand of Shenzhen, etc.¹¹⁵ In 2016, the company achieved operating income of 12 billion yuan, of which drinking water business accounted for more than 80%.

The chart below shows China Resources C'estbon Co., Ltd. Operating Income Statistics (expressed in hundred million yuan) during the period 2013-2016.



Source: <http://www.askci.com/news/chanye/20171128/153603112867.shtml>

Today, the sales network of China Resources C'estbon has covered most provinces and cities of China. In the next five years, China Resources C'estbon will maintain its inclusiveness and foresight, keep providing consumers with more surprises and experiences by virtue of brand creativity, and passing more high-quality, stylish life concepts to consumers.

¹¹⁵ http://www.crc.com.cn/index_12770.htm , <http://www.crbeverage.com/EN/Home/>

3.3 Entering the Chinese market

China is one of the world's fastest growing economies, and it continues to attract companies of all types to its markets. The most challenging decisions for companies is how best to enter the China market.

Within China, rapidly changing demographics, rising incomes, increased consumer spending and an increasingly open business environment have all helped to make the Chinese market increasingly attractive to Western businesses across a variety of industries. Similarly, declining sales in their home markets has forced many US and European companies to relocate China firmly to the center of their long-term global growth strategies. Breaking into the China market successfully can seem like an almost impossible task to foreign companies with limited or no experience of doing business there.¹¹⁶

When deciding to do business in China, small medium enterprises (SMEs) should first conduct market research on the business fields in which the SME is interested and are necessary. Second, before take the initiative to enter the market, SMEs should pay attention to several important elements, including compliance with laws and regulations, the necessity of obtaining protection for intellectual property rights, difficulties resulting from foreign exchange control, the administrative and geographical structure in China and, most importantly, careful selection of business partners.¹¹⁷

The first realization that foreign companies often need to make is that China is in no way a uniform and homogenous market. Although China is unified in the geo-political sense, socially and economically the picture is much more disparate and fragmented. Uneven rates of economic growth in different parts of China over recent years have served to exacerbate many of the economic and social differences that already existed between different provinces. For example, there are huge variations between different provinces

¹¹⁶ <https://www.b2binternational.com/publications/china-market-entry/>

¹¹⁷ *Ways to enter the Chinese Market*, EUSME Centre, Updater in 2015; http://ccilc.pt/wp-content/uploads/2017/07/eu_sme_centre_-_sk_-_ways_to_enter_the_chinese_market_oct_2015.pdf

in terms of population levels, per capita GDP, average income levels, consumer spending habits, education levels, literacy rates, lifestyles and so on. As such, it is certainly no exaggeration to state that rather than representing a single, unified market, China is actually a collection of individual sub-markets defined by vastly differing demographic, economic and cultural characteristics.

In recent years, the prevailing wisdom among foreign enterprises has been to focus predominantly on China's Tier 1 cities¹¹⁸ (i.e. Shanghai, Beijing and Guangzhou) – highly populated areas with a large, middle-class representation and income levels well above the national average. Tier 1 cities are China's most mature markets in terms of consumer behavior and are typically the most suitable testing ground for foreign companies with limited experience in China. Although being based in a Tier 1 city may offer the lowest risk point of market entry, it will also mean that the company faces higher operational costs and more competition.

Economic growth and rising incomes in China's Tier 2 cities have made entering these markets much more attractive to foreign suppliers than it was in the past. Not only do Tier 2 cities have the advantage of lower set-up and operating costs, but the increase in consumer spending power in these areas is creating a rapid growth in demand for foreign manufactured goods and products. In particular, cities such as Shenzhen, Tianjin, Wuhan, Chongqing, Chengdu, Nanjing, Qingdao, Dalian, Suzhou and Hangzhou all offer strong commercial opportunities for foreign companies across a range of sectors. Over the long term, including Tier 2 and even Tier 3 cities in their strategy can enable foreign companies to gain first-mover advantage in these cities and lead to greater long-term market success.¹¹⁹

¹¹⁸ China has 613 cities which are usually divided into four tiers. Different organizations define a tier using a number of factors but they always fall within the following three main categories: GDP (each city is first classified by Gross Domestic Product and cities range from US\$350 trillion to minor cities with GDP under US\$20 billion), politics (city controlled directly by central government, provincial and sub-provincial capital cities, prefecture capital cities, county level cities), population (from cities with more than 15 million people to cities populated by less than 150,000 people). For further information: <http://multimedia.scmp.com/2016/cities/>

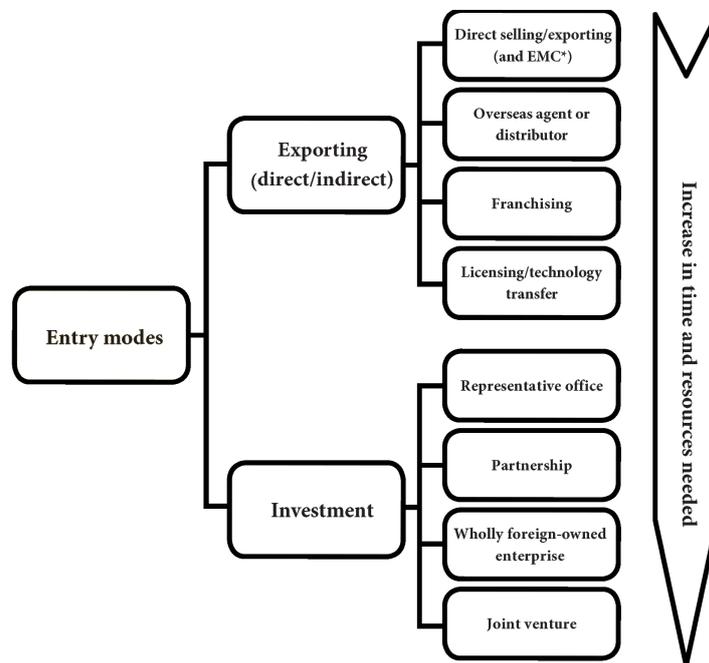
¹¹⁹ <https://www.b2binternational.com/publications/china-market-entry/>

The main ways of entering China include:

Direct exporting, referring to the exporting of goods and services from one country to another directly to the final customer;

Indirect exporting (using an intermediary), referring to selling goods to an intermediary based in your target market, who in turn sells your products to customers. Such intermediaries may include agents, distributors, licensors, franchisees etc.;

Investing directly, referring to the establishment of a legal entity in another country for the purpose of expanding operations and/or production. Such entities may include wholly foreign-owned enterprises (WFOE, commonly known as WOFE), joint ventures (JV) and partnerships.¹²⁰



Direct export: refers to the shipment of goods, provision of service across borders or transfer of technology from one country to another directly to the end customer. The seller

¹²⁰ *Ways to enter the Chinese Market*, EUSME Centre, p.2.

of such goods, services and technology is called “exporter” who’s based in the country of export whereas the overseas-based buyer is usually called “importer”.

Exporting of goods to China always involves engagement of a company which has a license for import/ export according to Chinese laws. Such a company has to be registered in China. Therefore, the term “importer” in Chinese trade terminology usually refers to the registered company in China possessing an “import/export license”. Such a company can be a buyer and thus importer in the general sense, but most often it is only a service provider/intermediary assisting with import (bringing the goods across the border and facilitating international payment). Between the advantages of direct exporting we can find greater potential profits, customers who feel more secure in doing business directly, faster and direct feedback about the product and its performance in the marketplace, better protections of trademarks, patents and copyright. Some disadvantages can be the inability to respond to customer communications as quickly as a local agent can, need to handle or be actively involved in all logistic transactions.¹²¹

Agent: is the company’s direct representative and is normally paid a monthly management fee and/or commission to help represent and sell the company’s product. For SME, entering Chinese market through a well-known agent or distributor is an easy way to enter China, because localized agents possess contacts and knowledge to promote the foreign product and help overcome barriers as language and culture. Sales agents and distributors can assist in keeping track of policy and regulation updates, both locally and nationally, collect market data and quickly respond to change: we can say they’re company’s eyes and ears on the ground.¹²²

Distributor: buys the product and then sells it to customers through a third party or directly. Its income comes from the difference between its buying and selling price. Using a distributor as an entry way in the Chinese market can also be cost-effective and quite easy but have just one distributor for the whole Chinese territory is not recommended, is instead preferable to have a distribution network covering the nation. Between the advantages of using distributors we find less degree of risks for the company that transfers

¹²¹ *Ibidem*, p.4.

¹²² *Ibidem*, p.6.

them to the distributor; reduced costs, because the supplier company avoids to have an established place of business in the territory; the supplier only need to monitor the accounts of several distributors rather than for each customer. But a disadvantage is the loss of control over the activities of the distributor.¹²³

Licensing and Franchising: in a typical licensing agreement, the licensor grants the licensee the right to sell goods, apply a brand name or trademark, or use patented technology owned by the licensor, in exchange for payments to the licensor paid by the licensee for use of such right.

In a franchising agreement, the franchisor also offers know-how and access to a business system in addition to branding and products offered by the franchisor.

You can franchise almost any type of business. Under a franchise, the owner (franchisor) retains control of the brand and licenses (that is, grants permissions to) the franchisee to use its successful business model and brand. In exchange, the franchisee puts up the initial capital for the business, helps to promote the brand and pays a licence fee. The franchisor supports its franchisees by providing training, know how, marketing and other resources and skills.

The essence of licensing (which is also the basis of franchising) is the owner retaining ownership of its Intellectual Property while granting others the right to use it.

Whether you are licensing or franchising, the important thing is to protect your IP. Your brand, patents, know how, trademarks etc. are precious assets, which should not be shared casually.

WFOE (Wholly Foreign Owned Enterprise): also named WOFE, is a limited liability company owned by foreign nationals and capitalized only by one or more foreign investors. This kind of investment is appropriate for those companies whose main activities in China are manufacturing and selling products or provide services as research and development or business consultancy. Companies that want to engage in trading, retail and distribution of imported goods may also do so under a WFOE but must be registered as a specific type of WOFE known as a foreign-invested commercial enterprise

¹²³ *Ibidem*, p.7.

(FICE). According to WOFE regulations, “foreign investors are permitted to set up a 100% foreign-owned enterprise in industries that are conducive to the development of China’s economic benefits, and not prohibited or restricted by the China government”.¹²⁴ Choosing a solitary investment instead of a Chinese partner implies costs and timing of an enterprise’s set up from scratch in the market, but also means greatly simplifying the construction phase and being able to count on total control of the company.¹²⁵

Joint Venture (JV): is an agreement in which two or more parties decide to pool their resources for the purpose of a specific task, that can be a new project or any other business activity. In a JV, each of the participants (companies or individuals) is responsible for profits, losses and costs associated with it. There are two main types of JV: contractual JV, in which the parties do not set up a separate legal entity for the project but cooperate in partnership; corporate JV, whose business scope is realized through the establishment of a new, separate legal entity, distinct from the parties. In China, the most used form of joint venture is called Equity Joint Venture (EJV), a limited liability company with a foreign participation (not less than 25%) and with the Chinese partner who is a legal person; the JV agreement must be governed by the Chinese law. Usually, before the drafting of the JV agreements, the parties stipulate a “Memorandum of Understanding” (MOU), a written, not binding document belonging to the pre-contractual phase in which parties state the intention to negotiate in good faith; it’s commonly used as a way to clarify which key points of a deal need to be negotiated, as a method of announcing that two or more parties are negotiating, to protect all parties involved in a deal.¹²⁶

Representative office (RO): traditionally used as a one of the first way to enter the Chinese market, is not a legal entity but rather a linked office for the company’s headquarters’ in the home country, which is prohibited from engaging in profit-making activities. The main functions that a RO may carry out are: to conduct market research

¹²⁴ *Ibidem*, p.21.

¹²⁵ Cavalieri Renzo, *Lecture di diritto cinese*, Libreria Editrice cafoscarina, Università Ca’ Foscari 2015-16, p.73.

¹²⁶ *Ibidem*, p.72 - 93, 94, 95.

and surveys, to promote products of its headquarter, act as a coordinator for the foreign enterprise's activities in China.¹²⁷

Selling online: there are different methods for a business to sell online and therefore directly to its consumer in China, with a standalone website outside/inside China or a third-party platform outside/inside China. An existing standalone website outside of China may be an easy method of selling online, but companies should develop a Chinese language version of the website and also arrange for Chinese credit cards payments; in addition, the consumer will have to endure long shipping times and transportation costs if the product is manufactured overseas. With a standalone website in China instead, issues as overseas delivery fees and import taxes are solved, assuming the company and its good are in China. In China, selling through a third-party platform based outside of China such as E-bay or Amazon is likely to have limited success, because Chinese consumers prefer to purchase goods on their local websites such as Taobao and Tmall or Alibaba, using their accepted credit cards and without language barriers. The advantages of a third-party platform inside China are that Chinese consumers are more likely to trust, online payments are easier and delivery is faster; for foreign sellers disadvantages are the certifications requirements and the necessity of the company registration in China.

Fairs and events: the fair is a promotional and advertising tool that takes advantage of the engagement opportunities offered by industry events to give visibility to a brand. It's used by many company, especially of small-medium dimensions which are at the beginning of their business abroad, with the aim to expose themselves and their product and to obtain visibility. The marketing of fairs is aimed at different types of subjects such as companies of products and services, event organizers, trade fair organizations, and others such as service providers involved in setting up fair stands, hoteliers and restaurateurs.

Exhibitions, exhibitions, shows can be of different types, are diversified by sector of interest and target groups. Very often, the fairs are organized to create an opportunity for meetings between people who work, in different ways and with different objectives, in the same sector or in related sectors. In this case, the event serves to put companies in

¹²⁷ *Ways to enter the Chinese Market*, p.17.

touch and are structured on B2B (business to business) dynamics. In other cases, the fair is seen as a promotional moment for the public, through which companies present themselves to consumers. Typical events of the B2C type (business to consumer) are, for example, those of the agri-food sector, in which the companies that exhibit their productions are addressed directly to an audience of potential customers.

The fairs are also opportunities for professional growth and training. In fact, the exhibition is accompanied by meetings, conferences, round tables, organized to train, inform, raise awareness of the stakeholders of a given sector or of a market niche. Participating in an exhibition offers numerous advantages for companies that are able to exploit their full potential.

The fairs are also moments of strong aggregation in which it is much easier to be able to build new relationships with operators of the sector of interest, tightening knowledge from which can propitiate business solutions.

3.3.1 Foreign bottled water brands

More and more Chinese are now directing their purchases to mineral, distilled or purified waters, beginning to prefer cold or icy water in the summer months to cool off. The expensive foreign brands in this case are considered synonymous with quality, safety and reliability and with the greater purchasing power of the middle class can now spread among the population and become a symbol of the economic well-being of the buyer.

The Chinese are aware that for the correct human nutrition five elements are necessary: fats, proteins, carbohydrates, vitamins and minerals, and the latter are usually taken in insufficient quantities. The easiest mineral supplement is water, but the springs all offer a different product, with a unique taste and mineral content. In fact, there are drinking waters with a very low percentage of minerals. Even the bottling material can affect its

properties, for example the glass bottles are much more suitable than the plastic ones to store the sparkling water, because they avoid better the escape of carbon dioxide.¹²⁸

According to OEC data¹²⁹, the total amount (expressed in million dollars) of imported water in China increased substantially. In 2010 the total export amount was of \$16.2M: France was the first nation from where China imported water for a 50%, with an import value of \$8.12M, followed by Italy only with a 11% (\$1.73M). In 2011 the total import amount was of \$19.7M and the French imports were the 47%; in 2012 the total amount increased to \$24.1M with French imports decreasing to 30%, Italian increasing to 15% and Japan detaining the 13%. In 2013, China continued to raise the volume of imported water with a total of \$32.7M, France detained the 26%, Italy still the 15%, Canada had the 13%, followed by United Kingdom with 4.4% and Czech Republic with 3.9%, Norway 3.2%. Between 2014 and 2015 instead we had an increase of the total amount from \$41M to \$59.2M, France passed from 25% to 31%, Italy from 16% to 12%, Canada 8% to 12%, UK 6.7% to 6%, South Korea made its growth to 6.1% and also New Zealand with 5.3%, Japan from 5.4% to 3.1%, Norway from 3.4% to 2.9%. What we saw in 2016 it's a total amount of imported water of \$65.6M, with France, Italy and Canada stable as the first three export countries.

One of the most popular foreign brands in China is *Danone* 达能 : Group Danone¹³⁰, founded in 1972, is a French company with multiple international joint ventures. Its global standing includes: world no.1 in fresh dairy products (55.9% of sales with *Activia*, *Danacol*, *Danette* etc.), no.2 in bottled waters (17.5% with *Evian*, *Volvic*, *Badoit* etc.) and infant nutrition (20.4%), no.3 in medical nutrition (6.2%).

¹²⁸三大義大利氣泡礦泉水品評-Ferrarelle 法拉蕊、SAN BENEDETTO 聖碧濤、S.PELLEGRINO 聖沛黎洛, San da Yidali qipao kuangquanshui pinping – Falarui, Sheng Bitao, Sheng Peliluo; 痞客邦 PIXNET, <http://tasteitaly.pixnet.net/blog/post/17022907-三大義大利氣泡礦泉水品評-ferrarelle-法拉蕊>

¹²⁹OEC, Water Trade, The observatory of economic complexity, <https://atlas.media.mit.edu/en/>

¹³⁰ <https://www.danone.com/brands/waters.html>



Danone made half of its activity in Europe, but it also emerged with a high growth potential in some foreign markets, particularly in China and Indonesia for Asian market and Mexico, Brazil and Argentina for Central-Latin America. Difficulties of doing business in China have been represented by some cultural and psychological distance, as well as legal and political difficulties: for these reasons Danone invested in JV with the top 3 largest yogurt-water brands in China (*Wahaha*, *Mengniu*, and *Bright Dairy and Food Co*) to take advantage of local experience and know-how.

Between Danone's brand, one of the most popular is the water *Evian* 依云, a French brand of bottled mineral water, renowned for being among the best in the world. First made famous by the Marquis of Lessert who drank this natural mineral water as a remedy for illness, Evian was accredited for allegedly improving his medical conditions involving kidney and liver problems. Believing the water to have mystical curative powers, physicians began to prescribe it as a health remedy. Decades later, the water had become so popular that the land was fenced off, and the water was bottled and sold. In 1829, the first mineral water company was founded as *Société des Eaux Minérales* which bottled Evian water for sales across borders.



Today, Evian is owned by the French multinational company, Danone Group, which chose CDL to manage and sell Evian in China. In terms of beverages in China, it is widely accepted as the peak of premium bottled water. In fact, sales of Evian in China have been growing faster than in any other market in the world. With more than 25 years of experience in distribution, logistics, sales, inventory management, and marketing, the team at China Distribution Ltd. is committed to providing the very best products and services to US and European companies looking to sell beverages in China. CDL is the sole distributor of Evian in China and has been selling this bottled water for many years.¹³¹ Evian is definitely sitting among the most popular products. The imported product from France is considered as a high-end water in China. While in France, a bottle of 1.5L is about 0.50€ (US\$ 0.59), in China for a bottle of 33cl it's almost RMB 10 and in some physical shop the price can reach RMB 20 (US\$ 3.128). It's said that Evian water can enhance skin elasticity and beauty, this unique reason can be a great marketing weapon today among Chinese women consumers. Evian mineral water is often referred to “luxury” product by many people: it is not because it is expensive, but because it is a notch higher. Evian takes care of its appearance and also often does this. Since 2007, Evian has brought “fashion” into the water industry: in 2017 Chiara Ferragni, in 2016 with Alexander Wang, the Chinese fashion designer from New York, in 2015 with the popular brand Kenzo, in 2014 with Eliee Saab, in 2013 with Diane Von Fursterberg, in 2011 Issey Miyake, in 2010 Paul Smith, in 2009 Jean Paul Gaultier, 2007 Christian Lacroix. Chinese people rely

¹³¹ <http://www.chinadistributionltd.com/products-in-china/beverages-in-china/water/evian/>

a lot of a product's appearance to make their purchase or not. Brands can play on their product design and packaging to make the difference from competitors and attract consumer's eyes, Evian is one of these. Also, it can indirectly increase the sharing on social network if the design meet people's taste.

The Switzerland-based *Nestlé Group*, the world's leading nutrition, health and wellness company, has a long history of doing business in China. It opened a distribution office in Shanghai, the first of its kind in China in 1908. Its first joint venture on the Chinese mainland began operation in 1990. Nestlé, which has invested more than 8.3 billion yuan (US\$1.3 billion) in its businesses in China, said it will continue to increase its investment there. As one of the earliest foreign companies to enter the Chinese market, Nestlé now operates 31 factories in China, including ten joint ventures, with about 50,000 Chinese employees.¹³² Between the countless brands owned by Nestlé, in the Chinese market are well positioned bottled waters with *Perrier*, *Nestlé Pure Life*, *S. Pellegrino*; coffee with *Nescafé* and *Nespresso*, chocolate and ice cream etc.¹³³



The key strategy taken by Nestlé in coming to China is developing partnership. In order to create supply chains, Nestlé has built great infrastructure through the China. Through these years, Nestlé in China has developed partnership with many brands.

¹³² <http://www.china.org.cn>

¹³³ <https://www.nestle.com/brands>

The Coca-Cola company 可口可乐公司 is owner of *Ice Dew*, launched in 2001 a socially responsible water brand in China, offered in two varieties: mineralized and purified. A sub-brand, *Ice Dew Chun Yue* 纯悦 (“Pure Joy”), hit the market in 2014 with a focus on Millennial consumers through the “Trust in Every Drop” tagline. A portion of Ice Dew Chun Yue sales supports the Clean Water Project initiative developed jointly by Coca-Cola China and ONE Foundation, a local NGO. The project installs water purifiers in rural schools across China. QR codes on bottles of Ice Dew Chun Yue – the official bottled water brand of the China Olympic Swimming Team – give consumers the opportunity to engage with the brand online. Ice Dew also sponsors charity walk programs including “Walk for Love” trail walk program, which encourages fans to walk 40-50 km to raise funds for the Clean Water Project. Since 2013, “Walk for Love” has raised more than RMB 8 million (US \$1.2 million) to provide quality drinking water for 300,000 children in 600 rural schools.¹³⁴



Coca-Cola has quietly launched its super-luxurious Swiss sparkling water on Chinese online marketplace Tmall. Called *Valser*, the water highlighted its source as Switzerland and claimed that it “comes from The Alps, which were formed 200 million years ago”. The price for its 750ml classic bottle is 64 yuan (US\$9.29). Coca-Cola acquired the Swiss water brand for US\$2.64 billion in July 2002. As consumers have become more health

¹³⁴ <https://www.coca-colacompany.com/stories/ice-dew-and-smartwater-join-cokes-roster-of-billion-dollar-brand>

conscious, sales of soft drinks and juice dropped, driving the carbonated beverage giant to turn its eyes to healthy drinks and bottled water businesses to cater to people's preferences for low-sugar and sugar-free beverages.



3.3.2 Italian bottled water brands

As we have already seen, Italy in the Chinese bottled water market is second only to France, detaining a good portion of sales with some of the best Italian brands like San Benedetto, *S. Pellegrino* and *Acqua Panna*, *Ferrarelle*, *Sant'Anna*; these brands are sold in the HORECA¹³⁵ sector, in the international hypermarkets and, of course, on the Chinese selling platforms online.

San Benedetto, the Italian water company based in Scorzè (Venice), is present in China through the general importer and with a mixed distribution model (direct and through sub-distributors) and is on the shelves of all the major international chains (Metro and Carrefour in particular) and the national chains, with a price of 39 RMB (almost 6 euros) for six bottles on Chinese online selling platforms.

¹³⁵ HORECA is an abbreviation for the food service industry; the term is a syllabic abbreviation of the words Hotel/Restaurant/Café.



San Pellegrino water, founded in 1899, is the most famous Italian water in all the world. The company holds the S. Pellegrino brand and controls four other brands in the mineral water sector (*Levissima, Vera, Panna*) as well as some brands of soft drinks and aperitifs. Bottled in the municipality of S. Pellegrino Terme in the province of Bergamo, in northern Italy, it has a very high mineral content, so it is considered a hard water, ideal to drink during meals. It counts ten production sites in Italy, including its headquarters and belongs to the Swiss Nestlé. Abroad, more than in Italy, is considered as fashionable and in China has a price of about 55 yuan (7 euros) per bottle.



Ferrarelle, bottled from 1893, is today a company with three strategic centers: Milan, Riardo (Caserta) with the sources of Ferrarelle, Santagata and Natia, Darfo Boario Terme

(Brescia) with the sources of the *Boario*, *Vitasnella* and *Fonte Essenziale* mineral waters. In China is mostly present in Italian restaurants and its sold for almost 50 RMB per bottle (around 6 euros).



Acqua Sant'Anna, the leading brand of mineral waters of Vinadio, Cuneo province, lands in China thanks to two agreements with two major food and drink chains Metro and City Super, two of the main signs of distribution in China, especially for expats in Asia.¹³⁶



The increasing attention of the Chinese population towards their own health, as already mentioned, has led to an increasing growth of the water bottle market, especially as regards the water sold by foreign companies and, in this case, by the Italian ones. In my

¹³⁶ De Angelis Stefano, *Acque minerali italiane alla conquista della Cina*, in SCS international, 3 febbraio 2015, <https://scsinternational.it/acque-minerali-italiane-alla-conquista-della-cina>

opinion, it's necessary to underline how even smaller Italian brands have appeared on the Chinese market, making their own way among the already known giants.

CHAPTER IV

ACQUA FILETTE S. r. l. EXPERIENCE

4.1 The company

Acqua Filette S. r.l., already since 1894, is the bottling company of *Acqua Filette* spring water, one of the purest mineral waters in the world, that flows limpid from the Italian source situated in the heart of Ciociaria, in the Lazio region. The source is located in the municipality of Guarcino, in the province of Frosinone, at 900 meters above the sea level, in the green and uncontaminated frame of the mountains of the Lazio Apennines and has an annual flow of, at least, about 50 million liters.



The products are exported with the aim of guarantee to everyone a water of superior quality, preserving the ecosystem and the health of consumers in compliance with the regulations established by Italian law, the European Union and the laws of the countries where the products are exported. The company controls and guarantees all phases of the production process: from customer service to design and graphics, from bottling to distribution.

The mission is to bottle and commercialize a product of absolute quality, with an exclusive packaging, recognized by the food and wine world as a product of excellence among mineral waters.

The vision of the company is to create, in the world of mineral waters, the culture of “drinking good”, educating the consumer to make a right and conscious choice, being able to recognize the different qualities of each source and product. In particular, the aim is to give to this water the same rank of wine, covering the same evolutionary stages of the oenological world.

4.1.1 History

The spring is located about 900 meters above sea level on the slopes of the Ernici Mountains. The chemical and physical characteristics of the waters confirm the Filette water table as a carbonate aquifer having a not very deep and extensive underground water circuit. Based on the fixed residue, hardness, salinity and quality of dissolved ions, the Filette water can be defined as a cold oligomineral with alkaline earth bicarbonate characteristics.



For the exploitation of mineral water a tunnel excavated in the rock was built and covered with bricks for a length of 6.50 m and width 1.15 with access protected by a lockable iron door. Below is the scope of the source: (minimum and maximum values depending on the rainfall / drought of the season):

PORTATA FONTE	VALORE	LITRI/SECONDO	LITRI/ANNO
FILETTE	MTN	1,5	47.304.000
	MAX	3	94.608.000



The first historical information on the existence of the source dates back to 400 BC and indicate that it was already known by the Romans, who dedicated it to Venus as a symbol

of the link between the goddess and the vital element. Even today, on the fountain where the rivulets of the Acqua Filette are canalized, a sculpture proves this particular symbolism.

The first written testimonies, instead, are dated back to 50 AC: Lucius Junius Moderatus Columella, a Latin author contemporary of Seneca, in his *De Re Rustica* celebrated the water of Guarcino, where the Roman legions stopped to treat their wounds of the military campaigns in the East: “*East in Guarceno Campaniae fluens aqua montibus oriunda, salubritati corporis accommodatissima*” (in Guarcino di Campania there’s a water that flows from the nearby mountains, very well-known for the well-being of the body).¹³⁷

Guarcino, not far from Fiuggi and Alatri, is located between the Cantari and the Ernici mountains. The center has medieval origins and was formerly populated by the Ernici. As evidence of a Roman settlement in the area have been found remains of an aqueduct, a complex of baths, inscriptions, a bas-relief and the foundations of a temple. Since this period and throughout the Middle Ages the water abundance of the territory was exploited to bring water to nearby cities. Over the centuries, the exploitation of watercourses has enabled various economic initiatives: paper mills, mills and, more recently, the bottling of table water and the hydroelectric industry.

Bottled and distributed starting from 1894, awarded in the same year to the International Exhibition of Medicine and Hygiene in Rome and in 1933 to the Tripoli Trade Fair, Acqua Filette gained notoriety as a healthy and curative water.¹³⁸

¹³⁷ <https://www.acquafilette.it/aziendafilette/>

¹³⁸ <https://www.acquafilette.it>



And it is from this ancient source, in the heart of the Ciociaria mountains, that Filette water is bottled. It is from these territories that Acqua Filette S.r.l. is born, a company that has been able to bring the quality of the water from the small province in which it was born all over the world.

4.1.2 The product and the collection

The absence of arsenic, the almost total absence of nitrates, the low sodium content and the perfectly balanced residue make Acqua Filette a precious water for health and particularly suitable for everyday use. Available in three different flavors: *Naturally Natural*, *Delicately Sparkling* and *Decisively Sparkling*, it is ideal to match with the best wines and the most delicious foods. The company produces the non-returnable glass and a cap save Acqua Filette from pollution, ensuring the highest quality, available in 375

ml and 750 ml non-returnable bottle size; in addition, there's also the size of the 500 ml PET silhouette bottle.¹³⁹



Bottled mineral water is destined to follow the same evolutionary path as wine. There is now the figure of the water sommelier, the hydrosommelier, this happens because water needs to be tasted: its smell, its palatability, its lightness and, above all, its organoleptic quality are appreciated. In the best restaurants, both in Italy and abroad, it is becoming a habit to find, in addition to the wine list, the mineral water charter.

“Water like Wine” is the name of the Acqua Filette project whose mission is to give water, the most precious good for man, the same dignity that the market reserves for wine and champagne. Filette water is a multisensory pleasure: balanced in the synthesis of microelements, it is delicate for the palate and is ideal to accompany the tasting of great

¹³⁹ <https://www.acquafilette.it/en/collezione/>

wines and champagnes, enhancing their persistence. The “Water like Wine” project finds the synthesis in the essential design of the packaging: a classic Bordeaux wine bottle, in extra-white glass of superior quality, covered with a matte paper label embellished with the initial F in silver foil. The aesthetic sense meets the excellence of taste with Filette water: you can find it in the best wine bars and in the most prestigious restaurants and hotels in the world.

The last chemical-physical analyzes, conducted by the Department of Public Health Sciences of University of Rome “Sapienza”, attested the fixed residue at 180°C: 224.0 mg/l, pH at the source of 7.75, carbon dioxide at source 15 mg/L, electrical conductivity specify a 20°C:279 µS/cm. Characteristic elements (mg/l): Bicarbonate (HCO_3^-) 247.0, Calcium (Ca^{+2}) 82.0, Sodium (Na^+) 2.9, Magnesium (Mg^{2+}) 1.0, Sulfate (SO_4^{2-}) 4, Nitrate (NO_3^-) 0.2, Arsenic (As) Absent.



ELEMENTI CARATTERIZZANTI COME DA ETICHETTA (in mg/l)

Bicarbonato	247,0	Calcio	82,0
Sodio	2,9	Magnesio	1,0
Solfato	4	Nitrato	0,2

Microbiologicamente pura – Indicata per le diete povere di sodio

ANALISI CHIMICA E CHIMICO FISICA: Università degli Studi di Roma “La Sapienza”
Dipartimento di Scienze di Sanità Pubblica - Roma, 22 gennaio 2018

Conducibilità elettrica specifica a 20°C: 279 µS/cm - Residuo Fisso a 180°C: 224,0 mg/l
pH alla sorgente: 7,75 - Anidride carbonica libera alla sorgente: 15 mg/l

Acqua Filette S.r.l. è un'azienda con sistema di gestione integrato certificato secondo le norme:
UNI EN ISO 9001: 2008.

Presso l'azienda Acqua Filette S.r.l. è in vigore l'applicazione dei principi del sistema HACCP come previsto dal regolamento 852/2004. Caratteristiche chimiche: conformi al D.Lgs 542/92 e successive modifiche e integrazioni.

Conservare lontano da fonti di calore, al riparo dalla luce in luogo fresco e asciutto.

Data preferibile di consumo: 2 anni dalla data di confezionamento riportata sul tappo della bottiglia.

IMBOTTIGLIATA ALLA SORGENTE DA ACQUA FILETTE S.r.l.
VIA DELLE CARTIERE, 8 - 03016 GUARCINO (FR) ITALIA - WWW.ACQUAFILETTE.IT

Aut. Ministero Salute D.M. 3402 del 28/9/2001

SCIA n° 6998 del 23.12.2015

Among so many bottled water variety and brands, Filette water stands out particularly for its purity and clearness. In fact, in this water the arsenic¹⁴⁰ is absent, the concentration of nitrates¹⁴¹ is close to 0 (0.2 mg / l).

¹⁴⁰ Arsenic, in turn, is classified by the IARC (International Agency for Research on Cancer) as a certain class 1 carcinogenic element and placed in direct correlation with many oncological diseases. In water it is present only in the most toxic, inorganic form. In potable waters of volcanic origin, arsenic reaches very high concentrations. Furthermore, the industrial era saw an increase in arsenic in the environment; coal and gas-fired power plants, foundries, vehicular and air traffic, incineration of waste, the use of pesticides, crop protection products and fertilizers in agriculture have contributed to the spread of this element in the air, in the waters and in the land.

¹⁴¹ Nitrates are chemicals that are highly harmful to the human body, whose concentration indicates the degree of water pollution. In fact, the massive use of fertilizers, pesticides, the presence of pastures and industries cause the penetration of these and other nitrogen compounds in the aquifer. Nitrates can seriously hinder the transport of oxygen into the blood, with dangerous consequences; they can also be combined with proteins to form nitrosamines, carcinogenic substances for our body.



WATER COMPARISON CHART

WATER	COUNTRY	pH	ARSENIC µg/l	NITRATES mg/l	SODIUM mg/l	TOTAL DISSOLVED SOLIDS mg/l
FILETTE	ITALY	7,75	absent	0,2	2,9	224
ACQUA DI NEPI	ITALY	5,54	5,710	12	27,1	531
ACQUA PANNA	ITALY	8	0,355	2,9	6,4	139
AMOROSA	ITALY	6,4	0,153	2	4,7	49,6
DOLOMIA	ITALY	8,1	ND	2	0,2	114
EGERIA	ITALY	6,17	8,910	36	45	625
FERRARELLE	ITALY	6,1	6,810	5	50	1290
FIUGGI	ITALY	7,6	1,850	1,2	6,3	145
MANIVA	ITALY	8	0,675	3,8	2,2	95
FONTE ESSENZIALE (BOARIO)	ITALY	7,5	0,056	-0,5	9	2400
GALVANINA	ITALY	7,12	0,162	ND	34,2	570
GAUDIANELLO	ITALY	5,9	0,619	3	130	1156
LAURETANA	ITALY	6,3	0,019	2,3	1	14
LETE	ITALY	6,2	0,759	5,5	4,95	890
LEVISSIMA	ITALY	7,8	6,200	1,5	1,9	80
LILIA	ITALY	ND	1,900	8	ND	393
LURISIA	ITALY	6,6	0,985	2	2,6	35
LEGGERA	ITALY	7	4,650	4	ND	396
NATIA	ITALY	6,4	6,810	8	32	312
NORDA (SOURCE: DAGGIO)	ITALY	7,2	3,730	3,5	1,9	60
PLOSE	ITALY	6,6	0,259	1	1,2	22
ROCCHETTA	ITALY	7,56	0,198	1,1	4,13	174,1
SAN BENEDETTO	ITALY	7,52	0,468	9	26,4	265
SAN BERNARDO	ITALY	7	0,489	1,4	0,8	34,5
SAN FELICE	ITALY	7,5	ND	12	8,8	226
SAN PELLEGRINO	ITALY	7,5	1,380	2,9	31,2	854
SANGEMINI	ITALY	6,19	0,204	0,75	19,5	932
SANTA CROCE	ITALY	7,7	0,124	1,1	1,5	180
SANT'ANNA VINADIO	ITALY	7,4	5,220	0,76	1,2	43,2
SMERALDINA	ITALY	6,78	0,021	9,9	25	142,8
SURGIVA	ITALY	6,8	ND	4,9	1,9	41
SVEVA	ITALY	6,25	2,744	3	ND	1356
ULIVETO	ITALY	5,8	0,088	7,1	67	745
VITASNELLA	ITALY	7,4	0,117	4,5	3,4	396
TY NANT	WALES	6,8	ND	<0,1	3,7	165
TAU	WALES	7,2	ND	<0,1	21,4	208
PERRIER	FRANCE	ND	ND	13	11,5	475
HILDON	UK	7,3	ND	6	7,7	312
ELSENHAM	UK	ND	ND	0,3	22	400
EVIAN	FRANCE	7,2	ND	3,7	6,5	309
APOLLINARIS	GERMANY	5,8	ND	1,6	470	1600
VOSS STILL	NORWAY	5,5	ND	ND	6	44
VOSS SPARKLING	NORWAY	4,8	ND	ND	90	290

- **ARSENIC:** Classified by the International Agency for Research on Cancer (IARC) as an ascertained carcinogenic element of Group 1. DL 31/2001 and UE Directive 2003/40/EC sets its limit value at 10 µg/l.

- **NITRATES:** Their presence in water indicates pollution in water sources, caused by fertilizers and nitrogenous components in general. Nitrates can also combine with proteins to form compounds known as nitrosamines which can cause cancer. DM 29/12/2003 on Mineral Waters sets its limit value at 10 mg/l of Nitrates for newborn babies; the United States Environmental Protection Agency (EPA) together with the World Health Organization (WHO) recommends a limit value of 10 mg/l.

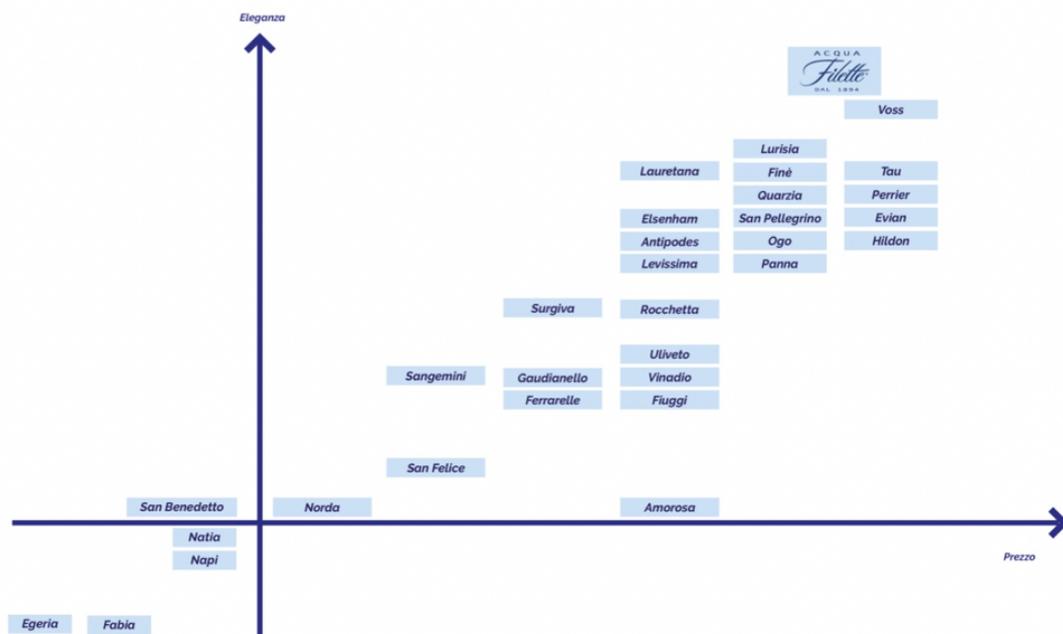
- **TOTAL DISSOLVED SOLIDS (TDS):** Unless recommended by a medical professional, mineral waters containing TDS levels between 50 and 500 mg/l, classified as low mineral content water, are the best recommended for daily use.

- **SODIUM:** A value less than 20 mg/l is indicated for low-sodium diets and it helps to fight high blood pressure and water-retention.

- **ND:** not declared, not available.

- **Data sources:** Labels/official websites of mineral waters/2016/2017 Yearly edition "Acque Minerali" Beverfood Edizioni; Published studies on "La Science" as part of the project Atlante Europeo of the EuroGeo-Surveys, Geochemistry Expert Group 26.11.2010 by Professor Benedetto De Vivo, Annamaria Lima, Stefano Albanese and Lucia Giaccio of the Department of Earth and Environmental Sciences, University "Federico II" of Naples.

Acqua Filette, with only 0.2 mg/l of nitrates and with completely absent arsenic, is on the market as one of the purest waters in the world. Organoleptic qualities are of rare equilibrium, fixed residue 224 mg/l, the positioning in the premium segment is the logical consequence of the characteristics given by its nature.



The reason why this water is positioned among the purest waters in the world is given by the essence of the product itself: unique organoleptic properties and an elegance and exclusivity also given by the unique packaging. The consumer target corresponds to men/women 30/60 years with a high/very high income.

Therefore, we can affirm Acqua Filette's values, strengths and opportunity:

- The intrinsic qualitative factors of Acqua Filette, which is characterized by the almost total absence of nitrates and the perfect balance of the other elements.
- Exclusive Bordeaux bottle packaging, not imitable by others, that is a brand identifier.
- Refined taste for palatability, lightness.
- The innovative project "Water as an oenological product".
- Direct distribution and direct contact with customers.
- Company with short control chain, therefore flexible and effective.
- Direct control of the network through technological systems innovative.
- Being identified more and more like the water that accompanies the great wines on the table.
- Synergy, in sales and distribution, with the oenological world.
- Positioning in high-value-added market niches

Weaknesses, instead, could be the consumer's lack of culture regarding the mineral water product and the lack of awareness in making product quality choices.

4.1.3 Development in the domestic market

In line with a “luxury” approach, Acqua Filette oversees the national market with a network of ambassadorial agencies chosen among those that represent the most important brands of wine and champagne. The agencies are trained to tell the storytelling of Filette, make tasting-itinerary, events, acquire orders and manage customers.

Main Italian competitors in the domestic market are:

- San Pellegrino, Nestlé group, is the most famous Italian water abroad thanks to the huge investments in marketing, even though it is not considered among the luxury waters or has particular organoleptic qualities. Water is produced in both glass and plastic bottles.
- Ferrarelle special edition, Ferrarelle is the fourth Italian group in the mineral water sector. This bottle has been developed ad hoc to meet the needs of haute cuisine, the organoleptic qualities are not from premium water.
- Lauretana exalts 14 mg/l of fixed residue (lowest in Europe) although it is not a value objectively recognized as lacking nutritional elements; nitrate is 1.9 mg/l. To support the message, it has treated the packaging of the glass bottle by Pininfarina. It also produces PET.
- San Bernardo, minimally mineralized, like Lauretana.
- Lurisia, sources of ownership of Farinetti (Eataly), communicates the low residual fixed but it is worth what has been said for Lauretana and San Bernardo, that is a water without nutritional elements and is sold mainly in the Eataly stores.

▸Surgiva, elegant bottle exclusively in glass. Belonging to the Lunelli group (Ferrari sparkling wines) it is mainly sold in returnable format, not recognized by the high catering sector.

Concerning marketing strategies, Acqua Filette S.r.l. has innovated the high-end mineral water market with the formula “quality inside quality outside”, has invented the already mentioned concept of “Water like Wine”; has innovated the Ho.Re.Ca. entrusting the sale to agents of wine and champagne and direct distribution without intermediaries; has promoted the “private label” (service that offers the ability to customize the label of the bottles Filette water with the distinctive elements of your business); has been introduced in international markets, an action unimaginable for a small niche source in the province of Frosinone.

For what concerns strategic activities, the company is carrying on activities in Rome, Milan, Florence, Veneto, Sicily, North-East with the presence of a brand manager flanked to the network of agents already present on the sites; a partnership with the Michelin guide and activities on all Italian and French stars are in progress; it’s connecting all customers by a renovated website to have a direct line in communicating marketing strategies; the increasing diffusion of the brand goes on through the organization of fairs, events, tasting-events and reinforcing the relationship with ICE¹⁴², Italian institutes of culture, Italian embassies.

4.1.4 Development in the international market

Acqua Filette is currently commercially active in 40 countries worldwide. The main foreign markets are: Taiwan, Russia, United Arab Emirates, China, France, Ukraine, California and Jordan. The export covers in particular the 750 ml glass and the 50 ml pet silhouette formats.

¹⁴² ICE is the agency for the promotion abroad and the internationalization of Italian companies;
<https://www.ice.it/it>

The international vocation of Acqua Filette is expressed through the ability to operate in market scenarios of exclusive quality, to export its Italian commercial know-how (with “Water like wine” project) where the market is particularly receptive to quality products and made in Italy.

Acqua Filette has two export managers dedicated to this strategic market; main instruments used are: trade fairs and events in the sector and in luxury in general, direct marketing, relations with embassies, internet activities, international PR.

The fair is one of the fundamental elements for the opening of international scenarios and consequently of new markets. The fairs, in addition to generating opportunities for contact with new operators, consolidate existing relationships that develop from meeting to meeting. The choice of the exhibition is accurate, all over the world are selected fairs, or dedicated pavilions, coherent with the positioning: luxury fairs, food and wine world fairs.

Main competitors in the international market:

- San Pellegrino, part of the Nestlé group, Switzerland, is perhaps the most famous Italian water abroad: in New York alone, more than 50,000 bottles a day are consumed in restaurants. Water is produced in both glass and plastic bottles. It interprets the made in Italy in the world but does not have excellent organoleptic qualities (sodium 33.3 mg/l is an excessive value).

- Voss, the cylindrical bottle of the VOSS water was designed by a former creative director of Calvin Klein. The product had an excellent commercial impact at its launch in 2008, thanks to innovative packaging and breakage compared to the classic bottles; today it is a bit in decline because that packaging, that even if innovative, begins to suffer from a certain seniority.

- Perrier, famous all over the world for its sparkling qualities, the sparkling mineral par excellence owes its success to its exclusive taste and its iconic bottle which has now entered the collective imagination. In recent years, San Pellegrino has appropriated the values that inspired Perrier by overcoming it in the identification of water from the exclusive bubble.

•Lauquen. In a prestigious source located in the deepest heart of Patagonia born and flows Lauquen luxury water, recognized worldwide as an element of luxury present in the most international locations with its cool Lauquen Bottle; its very high price puts this water in a niche too exclusive.

•Elsenham, is classified among the premium waters also for the unmistakable bottle. The body and the cap are almost architectural, unique elements protected by copyright. The design is of the highest level, the water is very hard and rich in mineral salts.

Some of the trade fairs in which Acqua Filette participates in 2018/2019:



4.2 Acqua Filette in the Chinese market: company's managers interview

INTERVIEW

Interviewer: Alessandra Pallone

Institute: Ca' Foscari University of Venice

Interviewees: Mattia Bellomi - Stefano Ricci

Nationality: Italian

Position: Commercial Manager in charge of Italy - General Manager

Place of Interview: Acqua Filette S.r.l. (Guarcino, FR, Italy)

Date of Interview: 09/10/18

Method of Interview: Personal interview

Research questions:

Q1: Since when Acqua Filette is present in China (PRC)? How did the idea of investing in this market come about?

MB: Our product is present in mainland China since 2011. The choice to enter the Chinese market was certainly a targeted choice. China is such a potential market, it was in the past and it's still today, growing more and more every day with a hunger for imported quality products. China is "a place to be", you can't avoid to be in China today, of course in the best possible way, finding suitable partners. The future idea, in fact, is to

intensify our presence in the PRC through local marketing agencies who better know the local market.

Q2: Many brands choose to enter China by establishing a branch or an agency, which strategy instead is the one used by Acqua Filette S.r.l.?

SR: The strategy that we always use to enter all international markets is through the employment of an importer, that is a company which deal with the import of the product but also with the legal part concerning the country in question. We sell the product to the importers and they take care of importing it into the established market. Generally, our exporters are also distributors, this means that after they also sell the product to final customers such as stores, restaurants etc.: this is the case of China and Taiwan, we do not sell to the final customer but we use intermediaries, who already have knowledge of the distribution network, the local market and the marketing strategies.

Q3: How much do personal relations affect the Chinese business world? Do you think that 关系 are fundamental to success in the Chinese market?

MB: As far as China can be considered a different country because of language, culture, ethnicity and so on, it's not that different in social relationships and in the way of doing business. The importance of personal relations in China is certainly something essential, in a big country like this one to establish personal connection is the key to enter their business world, a simple business card is not sufficient, trust is the most important thing. I'd like to add something on this topic: distributors must be trustworthy, this is the reason why when we go abroad we tend to have a single distributor, trying to give him the exclusivity in order to build a trusted and loyal cooperation, as if it were a secondary branch of the company.

Q4: With the growth of bottled water market in China, did you register any evident changes in sales?

SR: The mainland Chinese market still needs special attentions, we will carry on more collaborations with local partners, even if we have already achieved good aims. To guarantee amazing growth data at the moment is Taiwan, where an example of main player is the 7-Eleven chain, considered there as a fancy store where you can find Western

niche products: is in Taiwan that we expect a 30% growth between 2018 and 2019. Furthermore, our distributor in Taiwan will start to deal with the distribution in PRC starting from Shanghai, so we expect a potential strong growth also in the continental market.

Q5: Considering Italian and foreign competitors in China, what do you think is an advantage of Filette water?

MB: The main advantage is the product itself. In a country where water is a product that can make a trend, the organoleptic qualities of Filette water and also the characteristics of the bottle and its packaging make the difference; and, of course, also the way we manage our distributors.

Q6: How social networks can help sales?

MB: The use of social networks, like Instagram for example but also Chinese apps, of course give to the product much exposure, it is possible to extrapolate customers' satisfaction surveys, and for our product there's a great satisfaction.

MB: In such a large and culturally different market, did the company encountered any risks? If so, how did you managed the risk?

A7: A classic risk in the Chinese market, that however is possible to prevent is the one concerning the trademark's registration. Filette, which has more versions in the transliteration from Italian to Chinese characters, has been registered in two ways to prevent any future problem and also to have much legal protection: so there's the simplified character version for PRC and the classical Chinese version for Taiwan.

Q8: Talking about the Chinese customers, do you think Filette water is a suitable product for which target of the population?

MB: The range of prices in the case of bottled water in China is really large, Filette is positioned as a high-quality water, with unique characteristics and a distinctive packaging, a "made in Italy" that give to the product a very high position. The price of a bottle is more expensive than in Italy, being part of a luxury market assumes a high pricing. In China everything indulge in luxury is expensive, a luxury with affordable prices would

of course suggest some doubts in the consumer, who instead is ready to spend money when he recognize a superior quality. This is also a reason of the sales on Internet, where in order to be on online sales sites, company's products must have requirements and certifications that became traceable also for the customer, who feels confident in buying an expensive product.

Q9: Considering the pollution scenario to which the Chinese try to be careful, did you find a preference in sales for glass rather than for the PET? Can we say that packaging matters a lot both for marketing and for the attention to the environment?

MB: The attention of Chinese people I would say is more directed to the product itself, because of the well-known food-safety. More than the pollution, Chinese worry about the product they assimilate: better protection is in fact guaranteed by a more rigid plastic or glass, therefore a resistant packaging also in transport. For example, returnable bottle sale in China is unimaginable, it involves too many processes that don't guarantee safety for costumers.

Q10: What are the future objectives of Acqua Filette S.r.l.?

SR: The objectives in the short medium term are the consolidation in the Eastern market (PRC, Taiwan, Hong-Kong) with the same import partner we have in Taiwan and start specific marketing operations for those markets to increase brand awareness and continue to grow; implementation of the French market with consolidation of the relationship with the current importer growing year by year and also carry on direct operations with the Michelin circuit; implement the US market with the creation of a branch there and a network of distributors that can cover around 10 states – currently we are present in California, New York, Florida and also in Canada; in Italy our aim is to grow in the North with the opening of a second office. All our projects will be supported by a rebranding plan with *Italian independent* that will make changes in the brand, the bottle, social networks etc. in order to meet a modern idea of luxury brand. Moreover, a new brand is expected to be launched with a completely innovative product.

CONCLUSIONS

China, better known as the “Factory of the World” is experiencing an economic phase that will influence the economy of all the nations that depend on it. Behind only the U.S., today China represents the Second World Power with a Gross Domestic Product of 11.8 Billion Dollars (USD) in 2018 and an economic growth rate of + 6.9%.

China offers great opportunities for growth: the opening towards foreign countries and the economic and social reforms already triggered in the '70s, have allowed the country to expand transforming a country with strong agricultural origins to a great world power, driven by development industrial sector and the growth of the service sector.

As is generally known, entering the Chinese market is not always easy, there are many cultural, bureaucratic, customs, transport barriers and problems that a company may encounter in trying to sell its products to Chinese consumers. In addition to these difficulties there are problems related to the protection of your brand and its products from imitations.

But considering Italy, in 2016 Italian exports to China reported a total of 11.1 billion euros: this showed a growing interest in Italian products in China with a greater interest in Made in Italy luxury consumer goods.

The size and internal diversities of the huge Chinese market mean a need of a deep analysis before entering the market, since it is almost impossible for a medium sized company (like most Italian companies) to serve the whole of China. For sure, another key issue for the success in the Chinese market that should not be underestimated by Italian companies, especially those of Food and Beverage segment that has been discussed in this work, is managing entry processes in the Chinese market.

As emerged from the interview with Acqua Filette S.r.l. managers, the way of entering and doing marketing in China is fundamental for the success of the company and its product. This is an aspect in which companies need to focus all their attention, since a wrong choice could compromise the whole approach to market penetration. Generally, companies that opted for a partnership with a Chinese expert partner (knowing the Chinese culture, language, commercial network and marketing strategies) represents an advantage for their success in the overseas market.

It is known that China has been an important focus for luxury brands for several years. The global market for personal luxury goods is worth 249 billion euros in 2016, of which China represents 7%, but the Chinese represent 30% of the total. The Chinese market will in fact be one of the main growth factors of the next decade, for all companies that will approach it with a strategic vision. In fact, for the made in Italy, there is a very large fertile ground also because the Chinese consumer is evolving. Purchases are more aware and less belly, there is more attention to quality and style and less to the brand.

It is a fact that globalization can play in favor of Italy, focusing precisely on the millions of Chinese who are thirsty for original Italian luxury products even at full price, provided they are delivered everywhere. In the ecommerce basket there is 70% fashion, while the remaining 30% of products is equally divided between beauty and lifestyle.

As emerged from the analysis carried out in this paper, the big market of bottled water in China is made of domestic brands but also many foreign brands, with a very broad market gap in which the consumer has many options. As seen, however, the special attention paid to the health of the body, as well as the preference for imported western products, make the Chinese the typical consumer willing to purchase a luxury product whit recognized quality and exclusivity. We have seen how Acqua Filette, positioned in a high/very high price range for quality-price, points to those consumers with a very high income and also a predisposition to purchase high-end goods.

The Chinese consumer is going through a process of maturation, which is turning to more aware purchases with increasing attention for the product and style and less for the “logo” and greater demand for a high quality-price ratio. The majority of Chinese consumers

(91%) declare themselves more inclined to purchase luxury goods with more sophisticated design elements. We can say that today the Chinese consumer is less “omnivorous”, with a less “bulimic” approach towards luxury brands and more oriented towards the exploration of new brands and new product categories.

This maturation process is due to various factors, such as the increased exposure of Chinese to luxury goods that have become the norm; after years of compulsive shopping, the Chinese are now aiming to buy something unique.

The digitalization, as already underlined, has revolutionized the retail sector. China has become the most advanced e-commerce market in the world, especially from mobile phones. Luxury goods have so far been less affected by this phenomenon, but online purchasing is expected to become the preferred method in this segment too, especially in Chinese secondary cities. 50% of Chinese consumers say they have increased their online luxury spending on Chinese sites in the last year, compared to 41% bought on international sites. At the same time, the online luxury goods market in China still has quite low numbers (around 8% of the total market), and therefore a great potential for growth over the next few years. The forecasts identify in the online purchase the future and the method most used mainly by the younger generation and the middle class in the secondary cities.

The “World Factory” will become “the World Market”: “Made in China” products will no longer be sold in Italy, but “Made in Italy” products will be sold in China. Are Italian companies ready to exploit this opportunity?

What every company that invests in exports to China should do, in particular in the luxury sector that will be revolutionized in the immediate future by the network market, is to excel in online sales. Make some efforts to good positioning on e-commerce platforms is the key that opens the doors of the Chinese market, the access route for excellence without which complete success can't be achieved. For the Chinese population Internet is essential in every aspect of life, focusing on online sales - which like already saw is synonymous of safety and security as well as convenience and speed - is the way to make a difference in such a vast market. Obviously, even in e-commerce marketing strategies

are fundamental, because it is true that online customers are millions, but success is not automatic and obvious.

BIBLIOGRAPHY

ALBERTINI, M.C., DACHÀ, M., TEODORI, L., CONTI M.E., *Drinking mineral waters: biochemical effects and health implications - the state-of-the-art*, Int. J. Environmental Health, Vol. 1, No. 1, 2007

ARMENI, C., *The right to water*, IELRC BRIEFING PAPER, 2008

CALA', P., MANTELLI F., *Acque potabili e acque minerali: similitudini e differenze*, 2007

CAVALIERI, R., *Lecture di diritto cinese*, Libreria Editrice cafoscarina, Università Ca' Foscari 2015-16

CELICO, P., *Elementi di idrogeologia*, Liguori editore, Napoli, 2003

DANONE, *Annual report 1999*, Groupe Danone, 2000

DORE' D., GUO P., NETTE A.S., AN J., *Water in Chins*, Lucy Carmody Editor, 2010

DELLA SALA, S., *Italian legislation on drinking water quality and quantity*, Drink Adria, 2015

EVIAN, *Water... it's life*, SA des eaux minérales d'Evian , 2000

FERRIER, C., *Bottled Water: Understanding a Social Phenomenon*, Commissioned report for WWF, 2011

GLEICK, P. H., *The Myth and Reality of Bottled Water*, from *The World's Water, The Biennial Report on Freshwater Resources: 2004–2005*

GRAY, N. F., *Drinking water quality. Problems and solution*, Chichester Wiley, 1994

MERRET, S., *Introduction to the economics of water resources, An international perspective*, UCL Press Limited, 1997; Routledge London and New York 2014

OLSON, E., *Bottled water: pure drink or pure hype?*”, Natural Resource Defense Council (NRDC), 1999

PARAG, Y., TAMAR O., *Article on Bottled Water, for the Water and Health section of the UNESCO Encyclopedia of Life Support Systems (EOLSS)*, 2011

SALMAN M. A., BRADLOW D. D., *Regulatory Frameworks for Water Resources Management: A Comparative Study*, The World Bank, May 2006

SKLIVANIOTIS, M., ANGELAKIS A. N., *Water for human consumption through the history*, 2006

UNESCO, *Water for People, Water for Life*, United Nations World Water Development Report, Part II: A look at the world's freshwater resources, 2003

VIANELLI, D., PEGAN, G., DE LUCA, P., *Modalità d'entrata e scelte distributive del made in Italy in Cina*, FrancoAngeli, 2012

WORLD HEALTH ORGANIZATION, *Drinking-water*, Reviewed March 2018

WORLD HEALTH ORGANIZATION, Water, Sanitation and Health Team, *Guidelines for drinking-water quality*, 4th ed., Geneva: World Health Organization, 2004

SITOGRAPHY

<https://www.acquafilette.it>

<https://archive.org/details/gb.8537.c.2008>

<http://www.askci.com/news>

<https://atlas.media.mit.edu/en/>

<https://www.bain.com/insights/china-shopper-report-2017-chinas-two-speed-growth-in-and-out-of-the-home>

<https://www.bottledwater.org>

<https://www.b2binternational.com/publications/china-market-entry/>

<http://www.chinadistributionltd.com/products-in-china/beverages-in-china/water/evian/>

<http://www.chinaidr.com/tradenews>

<http://www.china.org.cn>

<http://www.chinawaterrisk.org/notices/bottled-water-in-china-boom-or-bust/>

<https://www.chinesestandard.net/PDF.aspx/GBT10789-2015>

http://www.cirs-reach.com/news/New_Hygienic_Standard_of_Packaged_Drinking_Water.html

<https://www.coca-colacompany.com>

http://cn.chinagate.cn/economics/2015-04/08/content_35265734.htm

<http://www.crbeverage.com/EN/Home/>

<https://www.danone.com/brands/waters.html>

<http://daxueconsulting.com/beverage-market-in-china/>

http://ec.europa.eu/environment/water/water-drink/legislation_en.html

<http://ecommercechinaagency.com/bottled-water-chinese-beverage-market/>

<http://www.efbw.org>

<http://eur-lex.europa.eu>

<https://www.euromonitor.com>

<http://www.eusmecentre.org.cn>

<http://www.fao.org/fao-who-codexalimentarius/en/>

<https://www.figlobal.com/fi-asia-china/visit/news-and-updates/beverage-market-china>

<http://www.finewaters.com/bottled-waters-of-the-world/china>

<https://gain.fas.usda.gov/>

<http://www.gazzettaufficiale.it>

<https://www.globaldata.com>

<https://www.globaldata.com/china-will-remain-worlds-largest-bottled-water-market-2021-says-globaldata/>

<https://globaledge.msu.edu/industries/food-and-beverage/memo>

https://www.theguardian.com/business/2016/oct/06/liquid-assets-how--business-bottled-water-went-mad?CMP=share_btn_link

<https://www.istat.it>

<https://www.nestle.com/brands>

<http://www.nongfuspring.com>

<https://www.nongfuspring.global>

<http://www.mwr.gov.cn/english/mainsubjects/201604/P020160406508815936744.pdf>

<http://multimedia.scmp.com/2016/cities/>

<http://pure.evian.com/fr/FR/>

<http://www.ramp-alberta.org>

<http://www.salute.gov.it>

<https://www.sanpellegrino.com/it/it>

<https://scsinternational.it/acque-minerali-italiane-alla-conquista-della-cina>

<http://tasteitaly.pixnet.net>

<https://www.telegraph.co.uk/news/worldnews/asia/china/8476080/Top-10-Chinese-Food-Scandals.html>

<https://www.theguardian.com/environment/chinas-choice/2014/apr/17/china-water>

<http://www.trendingpackaging.com/whats-about-packaging-in-water-bottles/>

<http://www.trovanorme.salute.gov.it/norme/home>

<https://www.wahaha.com.cn/news>

<http://www.who.int>