# Obesity epidemic in Mexico. Foundations to establish a Public Policy

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ABSTRACT: Is ensured that in Mexico, members of this generation will be the first to see our children die, and not by war, calamities or some natural disaster, but for chronic diseases caused by obesity. In short: Mexico suffers from a veritable public health epidemic. Mexico won in 2012 the first place in obesity worldwide. The fact is alarming, 7 out of 10 Mexicans over 15 are overweight or obese and the consumption of "junk food" is one of the main reasons for this. The consequences of obesity have already exceeded the response capacity of the public health system; for 2017 is expected that 170 billion pesos (13 billion dollars) will be required to fight them -all the budget of the Ministry of Health of federal government. Here are exposed the results of a multidisciplinary study, a documentary review and interviews with experts, in which some bases are proposed to establish a public policy that includes sanitary measures, preventive and corrective ones and the implementation of taxes on companies that produce, market or advertise non-nutritious foods; all aiming to stop this devastation.

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**Keyword**: OBESITY, JUNK FOOD, PUBLIC FINANCE

### I. INTRODUCTION

Consumption of foods called "junk food" (foods high in sugar, fat and salt) is most common in Mexico, and this has caused serious and intense public health problems that affect the physical performance of the people who consume them. Also, without pretending to sound like an augur of the catastrophe or prophet of the apocalypse, with the proofs and evidences presented here, over the medium term this phenomenon will be a plague of extermination.

This problem of social health has been dragging on for years due to the poor nutritional education. The lack of information has led us to think that the nutritional health depends on quantity and not quality; but it is emphasized: "It is not the healthiest the one that eats the most, but the one that eats the best." Of not changing these habits, as a result of eating foods with low nutritional content, the epidemic will kill many lives. Overweight and its fateful consequences are staggering-seventy percent of the population is in this place-; and according to figures from ENSANUT, for its acronym National Health and Nutrition Survey 2012 (INSP and SSA, 2012), direct inference seems unstoppable. Moreover, due to the use of resources to fight the consequences brought by the intake of these products, this situation considerably permeates the deterioration of public finances. Significantly, the increasing number of patients with obesity, diabetes and other chronic diseases, which are largely attributed to the consumption of unhealthy foods, the risk of collapse of public health care in Mexico is imminent. It may be quoted that in 2012 the federal government spent 70 billion pesos in their care and that number could rise to (about 13 billion dollars) 170 billion in 2017.

The problem is of such gravity, the government has promulgated a reform to the Constitution of the United Mexican States (CPEUM). However, the vast majority of people are unaware of the fact that, since 13 October 2011, the human right to nutritious food is recognized; and also provides that the State must guarantee it. In the Constitution it is noted "everyone has the right to nutritious, adequate and quality food. The State shall guarantee ". (CPEUM, 2012). It is notorious that there has been assigned to the state a priority and active role in the protection of the human right to receive nutritious food enshrined in the Constitution of the Republic, in which it is observed that it is not about calories, but about ensuring various factors such as quality, hygiene and nutrition. The new rule of law includes the duty of the Mexican State for ensuring that foods are kept free from adverse substances and quality; also covers its accessibility is effective and timely; in addition to its production and distribution which should be done sustainably.

It should be considered that, as a public policy, a precautionary approach is adopted, substantial and unnecessary costs could be avoided in solving various health problems such as childhood obesity, diabetes, kidney failure, high cholesterol high blood pressure just to name some diseases caused by poor eating habits. Thus the resources allocated to address these issues could build on other items, which would be reflected in a better quality of life.

This document is organized with a literature review and interviews with experts from various disciplines involved in the issue addressed, recommendations for a path forward are offered and delivered at the closing remarks. In particular, here are presented the issues of inactivity and the influence of TV in the consumption of junk food and its consequent effect on the generation of obesity in the population; likewise it is considered the legal field and the violation of collective human rights of consumers, as well as the repairing of the damage that the law should make accomplish.

A general principle of law indicates imperatively: "Whoever who causes damage, got to pay". In this sense, it is considered unquestionable that everyone should compensate for the impact that their products, acts or omissions that are noxious or harmful to others cause, either in their property, rights assets or in themselves. In this sense, this research seeks arguments to justify a proposal, broadly speaking to implement a public policy that addresses health preventive and corrective legislative measures as well as a new tax on companies that produce, commercialize or advertise junk food on television, so that somehow it compensates the damage caused to the health of Mexicans. Finally, it is fair to say that there is no social justice if the citizens are not well fed

## II. LITERATURE REVIEW

Generally, the terms food and nutrition are used as synonyms they are actually different terms. The Dictionary of the Spanish Language indicates on the word "Feeding. 1. tr. Give food to the body of an animal or a plant ... 6. tr. Der. Provide what is necessary to someone for their maintenance and subsistence, according to the civil state, to the social status, and the needs and resources of the obligee and the payer." To improve the idea, it should be mentioned the concept: "Nourish. Concept 1. tr. Increase the substance of animal or plant body through food, repairing the parts that are lost under catabolic actions. 2. tr. Increase or give new strength in any line, especially morally. "(RAE, 2009)

Here it is worth saying that nutrition refers to the nutrients that make food and includes a set of involuntary phenomena occurring after ingestion of food; that is, digestion, absorption or passage of blood from the digestive tract of its components or nutrients and their assimilation into the body's cells. Meanwhile, Nutrition is the science that examines the relationship between diet and health. Nutritionists and dietitians are health professionals who specialize in this area of study and are trained to provide dietary advice. Of course this does not explain everything\_ human nutrition consists of a set of biological, psychological and sociological aspects related to the ingestion of food by which the body gets the nutrients it needs, just as it receives intellectual, emotional, aesthetic and sociocultural rewards which are essential for full human life ((Bourges-Rodríguez, 2001).

According to the World Health Organization (WHO; OMS in Spanish) is clarified that nutrition is the intake of food in relation to the dietary needs of the organism; and a good nutrition is an adequate and balanced diet combined with regular exercise. Accordingly, the official website of WHO indicates that nutrition is one of the pillars of health and development, that everyone can strengthen the immune system with. The WHO says that healthy children learn better, healthy people is stronger, productive, and better placed to break the cycle of poverty (WHO, 2013). When considering the nutritional status of an individual, one can identify two situations about Nutrition: adequate nutrition or pathological deviations from it, this is called malnutrition. Etymologically, the term "malnutrition" includes any nutritional alteration, both excess (overnutrition) as default (hypo-malnutrition or undernutrition) or unbalanced (irregular nutrition) (Mataix-verdú & Martínez-Costa, 2009). According to the WHO, malnutrition is defined as nutritional disorders in all its forms (including the imbalance of energy, macronutrients and micronutrients and specific eating patterns). Conventionally the emphasis was to deficiency situations but malnutrition also applies to excess and imbalance in the intake (WHO, 2013).

Within this framework, the daily diet should provide raw materials to the body for its proper functioning; in this sense, functions, tasks and activities of the person will be performed efficiently if it has the necessary "fuel" to achieve it. Regardless of the monetary cost of food, nutritional value depends only on the nutrients that it brings, and selecting a proper diet in quantity and quality is needed for our health, since a poor nutrition causes that the organic machinery wears down and because of this, sometimes, it won't provide an adequate performance (Byrd, 2010).

## Prevalence of obesity in the health sector: Causes and effects.

It is opportune to mention that the WHO says that malnutrition is one of the factors contributing to the global burden of disease:

The rise in overweight and obesity worldwide is one of the major challenges to public health. People of all ages and backgrounds face this type of malnutrition, as a result of this, it is increasing rapidly, even in developing countries, the rates of diabetes and other diet-related diseases. In developing countries up to 20% of children under 5 are overweight...

An existence of unhealthy foods and inactivity increases over time the risks to health and contributes to the emergence of cardiovascular disease, cancer, diabetes and other problems. The world population is aging: people over age 60 will increase from 700 million today to 1 billion by 2020. Nutritional health at older ages will be a decisive factor in the global health situation ... (WHO, 2012).

This description is incomplete if the fact that there is a basic tool able to classify the different types of foods (and the necessary amounts of each) to consider an adequate daily human life, is not mentioned. Is in the new "My Plate" elaborated by the United States Department of Agriculture of North America (USDA). This dish illustrates the five food groups for family meal using a visual site (USDA, 2014). Malnutrition excess leads to obesity; it is a disease of multifactorial etiology, with a chronic course in which genetic, environmental and lifestyle issues are involved. It is characterized by a positive energy balance, which occurs when caloric intake exceeds energy expenditure, causing an increase in the body fat stores and therefore, weight gain (Bouchard, 2008). There's more, obesity is the main modifiable factor for developing chronic non communicable diseases, such as diabetes mellitus and cardiovascular disease (the two main causes of death in Mexico), among other risky complications (WHO, 2003; WHO, 2000).

In recent decades, the number of children and young Mexicans with overweight and obesity has increased dramatically, which has generated this condition to become a serious public health problem. Obesity is associated with a higher probability of premature death in children; and disability in adulthood (Olaiz-Fernandez Rivera-Dommarco, Shaman-Levy, Rojas, S, & Hernandez-Avila, 2006; Gutierrez and others, 2012); the increase in overweight and obesity are unprecedented, and its rate of increase has been among the highest in the global arena. (Stevens, Dias, Thomas, & Carvalho, 2008; Barquera, et al, 2009). Is important to note that there is a serious concern in the sense that the current generation gets to have a shorter longevity than before, due to lack of physical activity and unhealthy dietary intake (Astrup, Dyerberg, Selleck, & Stender, 2008).

Globally, childhood overweight and obesity are a major public health concern. During the last decade, the prevalence of overweight and obesity has increased at an alarming rate in many low- and middle-income countries. According to the World Health Organization (WHO), more than 42 million children <5 years of age were overweight by the year 2010. The European and Latin American regions are not the exception in regard to this problem. In the European region, despite actions to reverse the rising trend in childhood obesity, the problem remains. According to WHO, ~1/3 children aged between 6 and 9 years in Europe were overweight or obese in 2010 (Humphreys & Fiankan-Bokonga , 2013). In Latin America, a recent systematic review estimated that overall between 42.5 and 51.8 million children <18 years of age were overweight or obese between 2008 and 2013, representing 20-25% of children in the region (Rivera, González-de Cossío, Pedraza , Aburto , Sánchez, & Martorell, 2014). In Mexico, according to the most recent national nutritional survey, the combined prevalence of overweight and obesity is 9.7% in preschool-aged children or 33.6% when considering as well those at risk of overweight, 34.4% in school-aged children, and 35% in adolescents (Gutiérrez, et al., 2012)

The prevalence of overweight and obesity in Mexican adults ≥20 y of age was 71.3% (overweight 38.8% and obesity 32.4%) (Barquera, Campos-Nonato , Hernández-Barrera, Pedroza-Tobias, & River-Donmarco, 2013). Besides the above, according to the IMSS itself, 7 out of 10 Mexicans over the age of 15 are overweight or obese and the consumption of junk food is a major cause of it. For better or for worse, junk food and the ingestion of large amounts of it, is part of the daily life and also part of the Mexican culture, and several say that the process of preparation and poor hygiene are also causing health problems (Uribe, 2009).

Among the many factors that influence the development of overweight and obesity, the environment plays a central role. The conclusions made by the committee of experts from the WHO and the WCRF (World Cancer Research Fund) on the risk factors of obesity, stand within convincing evidence that a sedentary lifestyle increases the risk of obesity. Inside the probable evidence, is the consumption of energy-dense foods, consumption of sugary drinks and fast food and the exposure to hours of television (TV) (WCRF / AICR, 2007; Guran & Bereket, 2011). As for the relationship of obesity and watching TV, several mechanisms have been proposed (Jordan & Robinson, 2008) to explain the relationship between time spent watching TV and obesity risk (Hancox RJ, Milne, & Poulton, 2004), 1) the displacement of physical activity, 2) increased consumption of foods and drinks while watching TV and 3) increased consumption of foods advertised on TV 4) sleep deprivation 5) stimulates the children's preference for unhealthy foods (Guran & Bereket, 2011).

The advertising presented on TV can have the following effects: children ask more often the products that are announced (Chamberlain, Wang, & Robinson, 2006), therefore increasing their consumption of snacks and other foods promoted (Stroebele & De Castro, 2004; Wiecha, Peterson, Ludwig, Kim, & Sobol, 2006; Buijzen, Schuurman, & Bomhof, 2008), a fact that is reflected in their increased energy intake (Wiecha, Peterson, Ludwig, Kim, & Sobol 2006; Stroebele & De Castro, 2004).Previous research of the content of TV advertising to children have found that foods are among the most advertised products and are often characterized by having low micronutrient density, high sugar, fat and energy (Neville, Thomas , & Bauman, 2005; Powell LM, Szczypka, & Chaloupka, 2007; Batada & Wootan, 2007). The detailed nutritional analysis of foods advertised on television for children identified that up to 90% of these foods are high in fat, sugar or salt. (Guran & Bereket, 2011).

The Institute of Medicine National Academy (IOM) recognizes, firstly, that between the 2nd and the 3rd year the taste for foods with high contents in sugar, fat and / or salt can be determined (IOM, 2006) and, secondly, than in kids as young as three years old the impact of advertising on children's preferences can be detected (Robinson, Borzekowski, Matheson, & Kraemer, 2007). In an analysis in Mexico, advertisements related to food transmitted on free television channels in Mexico City were evaluated and it was found that it's presence was higher during children's programming than it was towards the general audience programming (25.8% vs. 15.4%). The foods that most frequently were announced were drinks with added sugar and sweets as well as cereals with added sugar. The foods advertised during children's programs had higher calories, fat and carbohydrates (Consumer Power AC, June 2007). The advertising strategies used were promotional and associate products with positive emotions (Pérez-Salgado, Rivera-Marquez, & Ortiz-Hernández, 2010). Recent studies have associated the largest number of food advertisements high in sugar or fat in children's schedules with a higher rate of overweight children. The study was performed in 7 countries of the European Union, the USA and Australia (Lobstein & Dibb, 2005).

**Table 1:** ads broadcast during children's television programs in various countries

Country	Advertisements per hour	About not recommended food
Mexico* (Channel 5)	39	17 (2007) - 11.25 (2010)
The United States	24	11 (2005) – 7.6 (2009)
UK	17	10
France	16	8
Germany	14	6
Greece	12	7
Finland	12	6
Denmark	12	5
Norway	7	2
The Netherlands	5	4
Belgium (Channel 2)	4	2
Austria	4	1
Sweden (TV4)	2	<1
Norway (TV2)	0	0

(Dibb, 1996; El Poder del Consumidor A. C., Junio 2007)

This table 1 shows the available international information revealing that Mexico is the country with the highest number of TV ads for junk food during the children's programming schedule within countries of Organization for Economic Cooperation and Development (OECD); with an average of three hours of television a Mexican child will have seen more than 20,000 ads for junk food in a year and none of nutritional guidance (Consumer Power AC, June 2007).

One of the most important changes documented in the world and in Mexico, associated with increased overweight and obesity is the increased consumption of carbohydrates. Particularly with low caloric and nutritional quality drinks (Obregon, 2012). The National School Health Survey conducted in 2008, that soda occupied one of the top five food consumed in all population groups (Shamah Levy T, 2010) showed that the intake from beverages represents 27.8 %, 20.7% and 20% of the total energy consumption in preschool, children, adolescents and adults respectively. The three main categories of beverage intake are whole milk, fruit juice with sugar and soda. (Barquera, Campirano, Bonvecchio, Hernandez-Barrera, Rivera, & Popkin, 2010). In the same National School Health Survey 2008, it was observed that water was a highly consumed beverage, however, soda consumption is almost on par with water (Shamah Levy T, 2010), a situation that threatens the health of schoolchildren, due to the close relationship observed between the consumption of sugary drinks like sodas-, with the increaseof body weight (Malik, Schulze MB, & Hu, 2006).

Studies on appetite sensations (this is, hunger, satiety and ingestion) support the idea that liquids are less able to produce satiety than solid foods (Hulshof & De Graaf, 1993; Raben & Tagliabue, 1994; Mattes, 2006; Haber & Heaton, 1997; DiMeglio & Mattes, 2000; Mourao, Bressan, Campbell, & Mattes, 2007). Mattes (2006) reported a total lack of dietary compensation, suggesting that the body does not record the intake of energy from beverages and then, it doesn't regulate appetite and food intake. Recently, Mourao et al (2007) showed that the macronutrient composition of the drinks has no effect on this lack of compensation. The mechanisms that explain this poor compensatory response of liquid are unknown. For these reasons, it is expected that the intake of caloric beverages is linked to a positive energy balance and obesity. This is confirmed in a study that found that an intake of 450 kcal from sweetened fruit drinks produced a significant increase in body weight, which was not found when the same amount of calories were consumed through solid food for the same individuals (DiMeglio & Mattes, 2000). A meta-analysis found clear links between soft drink consumption with increased energy intake and body weight, and a decreased consumption of milk, calcium and other nutrients, and the risk of diabetes and other noncommunicable diseases (Vartanian & Schwartz, 2007).

In Mexico, we study Jiménez-Aguilar and colleagues, who analyzed data from 10 689 adolescents from the National Health and Nutrition Survey 2006, in which the consumption of soft drinks was positively associated with body mass index (BMI) in Mexican male adolescents, since the analysis showed that for every serving of soft drinks consumed, BMI in male adolescents increased 0.17 units (Jimenez Aguilar, Flores, & Shaman-Levy, 2009). In the period 1999-2006, the energy consumed from beverages high in energy, where soda represents a predominant role, doubled in adolescents and tripled in adults (Barquera S. et al, 2008). The latest study took place in 75 countries and found that soda consumption is significantly related to overweight, obesity and diabetes worldwide, even in low and middle income countries (Basu, McKee, Galea, & Stuckler, 2013). When the organism is being fed poorly, not getting the nutrients it requires, having trouble digesting heavy foods, having high cholesterol or sugar, and having to digest highly processed foods and if it is not receiving its necessary serving of fruits and vegetables, it is not surprising that it is malfunctioning and having difficulties to eliminate toxins. (Byrd, 2010). From the medical point of view, a person is overweight when their body weight is 10% higher than that considered normal according to their age and structure; and when the weight of a person is 20% above their ideal weight then it is pathological overweight (Olivo).

Obesity is the main risk factor for developing type 2 diabetes, cardiovascular diseases (mainly heart disease and stroke), hypertension, dyslipidemia, musculoskeletal diseases and certain cancers such as breast or prostate (Clark & Brancati 2000; Astrup, Dyerberg, Selleck, & Stender, 2008). Obesity in children is associated with a higher chance of premature death; and a disability in adulthood (Fobb Freeman, 2003). Diabetes is a disease that eventually can get complicated with other conditions such as hypertension and results in conditions such as decreased vision, neuropathies such as skin sensitivity, cramps and decreased muscle strength, plus ulcers on the feet and legs from lack of blood circulation and the patient becomes more prone to getting infections, especially in the urinary tract or injuries, as their healing is slower compared to a healthy person. In the case of children with diabetes, they are characterized by a reduced growth and development in general.

Mexico, one of the countries with the highest consumption of soft drinks, has the highest rate associated with the consumption of these drinks, with 318 deaths per million of adults associated with the consumption of sugary drinks. That is, the annual death of 22,020 people, or 12% of the deaths in the world associated with consumption of sugary drinks (Singh, Micha, Katibzadeh, Lim, Ezzati, & Mozaffarian, 2013). A study published in 2011, said the total cost of diabetes in Mexico, increased from \$ 2.970 million in 2003 to \$ 8.836 million in 2010, an increase of over 290% in just seven years (Arredondo & De Icaza, 2011; Arredondo & Zúñiga, 2004).

# III. LEGAL IMPLICATIONS OF OBESITY

The Political Constitution of the Mexican United States (CPEUM), in its Title I, Chapter I Human Rights and Guarantees, specifically in Section 4 states: "Everyone has the right to nutritious adequate and quality food. The State will guarantee it. "This article is the source from which springs the State's obligation to ensure adequate food for the population and ensure public policies.

Said the jurist Miguel Carbonell (2012) "there is social justice if citizens are not well fed." This is the fundamental reason why we propose to fiscally, establish a special tax to the subjects that produce, commercialize or advertise junk food, those specific products; in this way, the Federation could acquire financial resources to be used to repair some of the damage to the health of society caused by the consumption of such foods and, where appropriate, to fund access to free drinking water in all schools, and so avoid financial collapse caused by the plague of obesity; It could also support the public expenditure to subsidize part of the foods that are within the basic food basket.

Article 133 of the Constitution (CPEUM) states: "This Constitution, the laws of Congress that emanate from it and all treaties in accordance with it concluded and to be held by the president of the republic, with approval of the Senate, shall be the supreme law of the union. The judges in every state shall conform to the constitution, laws and treaties, notwithstanding any contradictory provisions that may appear in the constitutions or laws of the states. "Internationally nutrition has been expressly considered a right in international human rights instruments adopted since 1924. Among them are statements that are not binding, conventions and agreements that are legally binding. The history goes back to the Declaration of the Rights of the Child (also known as the Geneva Declaration, 1924). Adopted after World War by the League of Nations and is the first assertion of the right to nutrition. The Declaration states that the child should have the means necessary for normal development of both, material and spiritual.

It has a normative foundation in the Universal Declaration of Human Rights Article 25 which says: "Everyone has the right at a level of living adequate for himself and his family, health and welfare, particularly food, clothing, housing and medical care and necessary social services ... ". (UN, 1948). From the above it follows that this is nothing more than the right to nutritious food for all members of society. The Declaration of the Rights of the Child of 1959, adopted by the General Assembly of the United Nations unanimously, stablishes on its 14th foundation that the child "shall have the right to grow and develop in health" and "entitled to enjoy food, housing, recreation and medical services."

For its part, the International Covenant on Economic, Social and Cultural Rights which came into force in 1976 specifically states in Article 11:

2. The participant states to the present Covenant, recognize the fundamental right of everyone to be free from hunger, shall take, individually and through international cooperation, the measures, including specific programs, which are needed: a) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, the dissemination of the principles of nutrition and by developing or reforming agrarian systems in such way that the exploitation and utilization are achieved most effective of natural resources; b) Ensure an equitable distribution of world food supplies in relation to the needs, taking into account the problems facing both countries, the ones importing food products and the ones exporting.

This confirms that a nutritious diet does not include junk food and that the problem of the distribution of it is a complement to solve, since only this is how society, and every Mexican will have access to healthy foods that help to his good performance.

As an argument supporting the above, there is the Protocol of San Salvador, developed in 1988 as an agreement where there is a specific article that talks about the right to food, it is stablished on this the article No. 12 which reads: 1. Everyone has the right to adequate nutrition which guarantees the possibility of enjoying the highest level of physical, emotional and intellectual development. 2. In order to do this right and eradicate malnutrition, the States Parties undertake to improve methods of production, supply and distribution of food, for which agree to promote greater international cooperation in support of national policies on the subject (American Convention on Human Rights, 1988; UN, 1988).

At the Convention on the Rights of the Child which came into force in 1990. Article 24 says:

- 1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health...
- 2. The participant states shall pursue full implementation of this right and, in particular, shall take appropriate measures: ...
- c) To combat disease and malnutrition within the framework of primary health care, among other things, the application of readily available technology and the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution; ... (UN, 1990).

It is intended that the Mexican State facilitates access to healthy food, and while it is not illegal to sell junk products, it should be necessary a tax on production, advertising and marketing thereof.

Built on the basis of decisions taken by individuals within societies it is stablished on organizations to have consequences for the rest of the set. In this orientation, is attributed a meaning to the word "responsibility". 2. f. Debt, obligation to repair and satisfy himself or through another person as a result of a crime, a fault or other legal cause. 3. f. Moral charge or obligation arising from possible mistake for someone else or in certain case. 4. f. Der. Capacity in any asset of right subject to recognize and accept the consequences of an act performed freely. "(RAE, 2009).

In 1953, Howard R. Bowen in his paper Social responsibilities of the businessman, edited by Williams College in Massachusetts, defined the social responsibility of the entrepreneur as "the obligations of employers to pursue policies, make decisions or take lines of desirable action in terms of the goals and values of society" (Rothmann- Bowen, 1953). The values on which companies rely to meet responsible culture ranging from the common good, are: subsidiarity, social participation, solidarity, environmental protection and transparency, to service, promoting quality of life and scientific and ethical development. All this has given rise to different 'sectoral' perceptions of what is the "social responsibility"; perhaps the most notable is that relating to corporate social responsibility. In the field of health, social responsibility is reflected in the actions of those involved in decision-making, both public and private, to establish policies and practices that promote and protect health. They should not harm the health of people and should protect the environment and ensure sustainable use of resources; must restrict the production and trade of products and substances inherently harmful to health and discourage the practices injurious to health.

In the last five years in Mexico a clamor came around that government schools offer a number of products of low nutritional or detrimental to the health of children and adolescents level, which was intended to close the doors (TEACH, 2008). However, the legal framework that regulates now the sale of "junk" or low nutritional quality, which initially intended to curb the sale of these products in the college, underwent several modifications, so being considered a strict order that included a list of prohibited products, it became an approved decree that allows the selling with certain restrictions. Selling these products, only now in smaller commercial presentations (ANSA, 2010). Junk foods are also known to contain additives, artificial colors and flavors, which are equally harmful to health (WHO, 2003).

About the disorders that produces food consumption valued as junk food or low or no quality, the following is revealing:

It is highly alarming reading specialist reports that relate the high incidence of childhood diabetes with eating junk food and the harmful effects on the children's brains from some dyes that have been banned in many countries to have shown to encourage hyperactive behavior and attention deficit...

Many brands of this type of food even hold in their wrappers legend "Socially Responsible Company", which becomes an absurd contradiction since it is almost a mockery to consumers. Really entrepreneurs who are dedicated to the field of production of this type of food would embrace such a legend and transform their products into beneficial for Mexican food, instead of pretending to ignore the high degree of responsibility for the future of this country. The parents have the delicate responsibility of deciding to promote healthy eating in our families and in schools, we require healthier foods sold for our children (Landa, 2011).

An investigation indicated that Mexico in 2010 was the largest consumer of soft drinks in the world, surpassing the United States with more than 163 liters per person per year consumption. Mexico already exceeds 40% to the United States in the consumption of soft drinks per person (Oxfam, 2010). According to research from Euromonitor International (Euromonitor, 2013), the soft drink industry locates Latin America to its main market in the world and that in this region the best sellers are carbonated beverages. In Argentina, which ranks first in the world, last year sold 131 liters per capita while in Chile and 121 liters. Mexico is in third place in the world ranking with about 119 liters, the 2012 analysis showed that during that year, Mexicans increased their consumption 1.5 liters in relation to 117.5 liters per capita in 2011 using that sales channel. However according to the report from The Coca-Cola Company, we know that Mexico is a world leader in the consumption of Coca Cola per capita with 650 drinks with 355 milliliters (Coca-Cola FEMSA, 2013).

And our child population already exceeds in overweight and obesity to US (Oxfam, 2010). Therefore, legislators from various political parties demand the establishment of a soda tax to fund free access to drinking water in all schools and to avoid financial collapse caused by the obesity epidemic. It deserves an emphatic treatment the fact that the consumption of beverages processed in Mexico is the main source of calories; about a quarter comes from such beverages. The Ministry of Health has indicated that high consumption of energy through drinks is a major cause of the epidemic of overweight and obesity. The lack of access to free drinking water in schools and public spaces has been the most effective mechanism to promote the consumption of high calorie drinks. Overall, companies that produce junk foods, solids and liquids, say they generate jobs and significant revenue to society, but that does not fade in the least the impact of their products in the health of Mexicans. Socially Responsible Companies should check the degree of corporate responsibility in developing healthier foods (Tovar).

According to the doctrine, damage is "any impairment that as a result of an event or event suffered by a person in their life or natural materials, and on your property or in your heritage." Now, for the National Autonomous University of Mexico (UNAM-IIJ, 2009), "DAMAGES. I, (Latin, damnum, damage, deterioration, destruction, offense, or pain that is caused to the people, things, or someone's moral or social values). For accuracy: II. A general principle of law, secular origin, provides that anyone who causes damage to another is obliged to repair it. III. Civil law. The concept of harm is related in all modern legislation with prejudice: all deterioration, damage, destruction, evil, pain that causes a prejudice, a capital loss. The CC welcomes this distinction in its aa. 2108 and 2109.

The liability, obligation to compensate the damage and prejudice-be derived from contractual sources, a unilateral declaration of intent, autonomous figures (illegitimate enrichment, business management) of an unlawful act, offense, or a mandate legal for objective reasons.

6. Strict liability to pay compensation for damages is based on the existence of mechanisms or substances, hazardous or harmful by nature (certain machines, chemicals, explosives, etc.), which can cause damage, without any wrongfulness mediated by the legal possessor of those objects. The theory of strict liability has boomed so far this century, especially its application to labor law. In Mexico, the C 1917 in its 123, Section: XIV, establishes the liability of employers for accidents at work and occupational diseases of workers if provided damage occurs "because of or during the exercise of profession or job".

# IV. TAX MATTERS AND PUBLIC POLICY

Social Justice is regarded as a regulative principle so as to establish a balance between the haves and have-nots, between rich and poor, socially strong and socially weak. On behalf of the Social Justice, tax laws change, and is considered perfectly logical that those who possess withstand higher loads (Olaso, 2008). Meanwhile, contributions are financial incomes to which natural or legal people are forced sacrificing part of their income as profits and income to contribute to public spending and sustain the so-called social justice.

Similarly, the word tax stems from the Latin term impositus. Taxes are compulsory charges that individuals and companies have to pay to finance the State. In short: without state taxes it might not work because it does not make funds available to finance the construction of infrastructure and provide public

services. The concept refers to the tax that is established and is provided as the economic capacity of those who should provide it. "Tax. 2. m. Der. Tribute required in light of economic capacity required to payment "(RAE, 2009).; however, following the previous trend, article 2, Section I of the Tax Code of the Federation (CFF) provides that taxes are the contributions payable by individuals and companies who are in the legal situation or made provisions thereof and which are other than those specified in Sections II, III and IV of the same article.

Bonilla, in his quote text: Taxes are cash benefits, to the state and other entities of public law, that same claim by virtue of its coercive power, in the form and amount determined unilaterally and without special consideration, in order to meet the collective needs (Bonilla-López, 2002). A tax classification separates into direct and indirect. Direct are those levied on income, wealth, capital or equity that directly affect the subject of the tax form, so it is not possible that the phenomenon of translation occurs. An example is the income tax. Indirect are those who transfer or pass on to third parties, taxed consumer operations, disposal of property, use or enjoyment of goods, imports of goods and services (Zamora). Another classification is: personal and real. The personal are those which take into account the conditions of the people who have the character of taxpayers. The real are those that fall on the thing subject to the tax, regardless of the status of the person who owns it. Personal taxes levied on income, profits, gains or income earned by individuals or companies as a result of the development of production, such as industry, commerce, agriculture, livestock, fisheries and forestry activities people as well as those who are dedicated to the exercise of a profession or independent or because of their contractual relationship with real things and real rights activity.

Another classification of taxes: general and special. The general tax, levied is that various economic activities of the same nature as the Value Added Tax (VAT) Income Tax (ISR), etc. The special tribute, which are taxed on specific activities, goods or services on holders of real rights, such as rights to use airport contribution improvement and acquisition of property such as cars. The excise duty levied on certain products in parallel with other general lien levied on the same goods; as an example has the value added tax. The existence of this double taxation on goods necessarily require an extra tax basis which is caused by the social costs generated by the consumption of products subject to such taxes. In theory, in some cases, the goal is to repair the society, by establishing a specific and selective taxation to such products; so it can be seen with two positions, a penalizing and other compensatory in nature, creating the possibility of policies which to some extent tend to damage caused by this consumption. In this vein, the CPEUM, Title III, Chapter II the Legislature, in Section III Of the powers of Congress, Article 73, section XXIX, Title 5, gives the federal government the power to establish special taxes: electricity production and consumption, carved snuff, gasoline and oil, and matches, water and honey fermentation products, logging and production and consumption of beer.

As regulatory provision of Article 73 CPEUM, the Law of Special Tax on Goods and Services (IEPS) states: This tax is payable by the production and / or sale or import of gasoline, alcohol, beer and tobacco, is regulated by legislation under the law that bears his name. As VAT is an indirect tax. By this we mean that taxpayers do not pay it directly, but they transfer or charge their customers, who would enter the SAT. (Rombiola, 2010). Article 2 of the Law on Special Tax on Goods and Services (IESPS), published in the Official Journal of the Federation (DOF), Last renovated December 11, 2013 apply from day 1 January 2014 (IEPS) indicates the next: the value of acts or activities that are indicated below, taxes and fees following shall apply:

Table 2: Special Tax Law Products and Services. Taxes and fees for activities.

Alcoholic beverages and beer	
With an alcoholic graduation up to 14°G.L	26.5%
With a higher alcoholic graduation than 14° and up to 20°G.L	30%
With a higher alcoholic graduation than 20°G.L	53%
Alcohol, denatured alcohol and crystallized honey	50%
Tobaccos	
Cigarette	160%
Cigars and other tobaccos	160%
Cigars and other hand made tobaccos	30.4%
Regular Gas	\$ 0.36 x liter
Premium Gas	\$0.4392 x liter
Diesel	\$0.2988 x liter

(Cámara de Diputados, 2013)

As could be seen, Table 2 shows a bewildering treatment of percentages that the consumer must pay to acquire products and services under the Special Tax Law Products and Services. Taxes and fees for activities. Such measures have been applied to various products. In one case, to discourage cigarette smoking, has implemented a tax on consumption; although it is clear that also requires a policy of prevention and information for seniors. For many, raising the cigarette tax by 160% sounds more like a revenue collection, rather than a comprehensive policy on education and prevention to avoid consumption, which complements the tax. It agrees that assessment, alone, is only to raise.

Referring to the harmful effects caused by the consumption of unhealthy foods on people in our country, this research considers the legislative proposal for the establishment of a special tax on companies that produce, market or advertise junk products that harm the health of the population. In this sense, the WHO has repeatedly called on governments, federal, state and municipal, to develop comprehensive policies to combat obesity as fiscal measures are implemented to abate these indices. For its part, the Secretary General of the OECD, Jose Angel Gurria, as well as the UN Special Rapporteur on Food Security, Oliver de Schutter, have recommended the Mexican government the establishment of taxes on products that contribute to the epidemic, while pointing that Mexico goes through a national emergency by the obesity epidemic that it lives. Given the above, several federal legislators estimate that a 20% excise tax on soft drinks called -the tax diabetes and obesity- which lead to a reduction in consumption of 16-24%, would mean a reduction in calorie intake and an improvement in the economy of families, that spend more in soft drinks than milk, meat, eggs, beans or tortilla. Also it would count with resources of around 2,300 million dollars, to introduce drinkers free drinking water in schools and public spaces, which would further reduce the consumption of high-calorie beverages; yet, resources would be funded to face the consequences of the obesity epidemic. The question is why not include other junk foods.

**Table 3:** Estimates for 20% tax dollar revenue to sugary drinks

Mexico	2.3 thousand millions
Brazil	2.6 thousand millions
Colombia	857 millions
Chile	256 millions
Perú	191 millions

(Oxfam, 2010)

Table 3 shows the countries of Latin America that are the major consumers of sugary drinks, in which Mexico ranks second, behind Brazil which by the way, has almost twice the population. In this vein, it is said that if the proceeds are invested only in 120,000 primary schools, each school would receive \$ 230,000.00 pesos. Therefore, the proceeds would be sufficient to introduce free drinking water in drinking fountains in all schools and tens of thousands of public spaces across the country, especially in small communities. This in the first year, then, the proceeds would only consist of spending in maintenance and there would still remain important resources for the health sector. (Páez, 2012). Soft drinks and beverages are currently taxed at a higher sugar content, the applicable fee is \$ 1.00 per liter. Is also charged tax on energy drinks and concentrates, powders and syrups for making beverages, with 25%. Not basic food, with a caloric density of 275 kcal or more per 100 grams are taxed at 8%, for example snacks, confectionery, chocolate and other cocoa products, custards and puddings, sweet fruit and vegetables, peanut and hazelnut cream, milk sweets, foods made from cereals, ice cream, ice cream and popsicles, in IESPS Act, published in the DOF, 2013 last renovated on the 11th of December applicable from January 1st 2014 (Chamber of Deputies of the Congress of the Union H, 2012). Experts believe that this does not attack the root of the problem, as it continues ignoring the advertising situation, which is what attracts the consumer, regardless of the product price. In Mexico there are companies that promote their corporate image with the distinction of possessing a plausible, sustainable and productive organizational culture; further ostensibly socially responsible companies, when in fact they disguise with a nuanced corporate image, the damage caused to society, posing as social agencies concerned with altruism and combating ecocide, but often what they really are causing is genocide.

Undoubtedly, prevention is the key, not only in this area but in all areas; are given maintenance machines to work properly and not defective in the future, since repairs are more expensive and generate waste of time and resources. Same with the human body, it is preferable to invest in prevention, so we do not have in the future, a sick and unproductive population (UNESCO). On the topic at hand, it should be discussed annually that inflation leaves behind a rise in the consumer price of basic necessities, culminating in the consumption of junk food, being cheaper and easier to get. However. A solution then is not to raise annually the cost of basic goods, but having this tax on foods that harm public health. Thus obtaining an economic resource that can be

used to subsidize foods that are actually required by the population, those who not only satisfy hunger momentarily, but that nourish the body, because as the Constitution stresses, we all have the human right to enjoy a nutritious diet. We are entitled to a healthy, integrated, productive, quality of life, not just to survive, but to enjoy life.

## V. RECOMMENDATIONS FOR A PATH FORWARD

This document is based on the method of document research and interviews with experts in the various areas covered by our research: health, nutrition, marketing, legal and fiscal. The main limitation of this document has been the integration of the research results of analysis of each and every one of the team members. This work is considered the launch pad of the work of a multidisciplinary group of researchers measuring the influence of media advertising towards consumers about junk foods and their impact on obesity, especially in children and adolescents attending primary schools and secondary of the 13 municipalities of the Laja-Bajio Region, in the State of Guanajuato, Mexico. To develop the proposed comprehensive public policy to combat this epidemic the aim is to replicate nationwide.

According to the investigation, there may be a relationship between the fiscal area and the subject of health. In the present case, you can set public policy to levy a tax on companies that produce, market or advertise non-nutritious foodstuffs. The guidance indicates that this charge could improve health. Existing evidence suggests that taxes tend to cause changes in consumption in the desired direction, although those in charge of formulating policies need to be cautious as they can alter the consumption of other important nutrients. Current research supports a 20% tax on junk food and beverage consumption as a means of moving towards healthy foods (Mytton, Clarke, & Rayner. 2012).

# VI. CONCLUDING COMMENTS

- 1. This document is the product of a documentary review of various specialties that address an issue that plagues Mexico: obesity. This paper was conducted by researchers from various scientific disciplines and refer to a sedentary lifestyle and the influence of TV in junk food consumption and its consequent effect on the generation of obesity in the population; equally there was an approach in the legal field and the violation of collective human rights of consumers and the damage that should be repaired by those enterprises that with their "food" are damaging the health of the consumers; some unsuccessful attempts by the government to control were shown on the path of increased taxes on junk food.
- 2. Mexico won in 2012, the not honorable first place in obesity worldwide. Because incurred chronic diseases, obesity in Mexico is a public health problem.
- 3. It is claimed that 7 out of 10 Mexicans over the age of 15 are overweight or obese and consumption of junk food is a major cause of it. Mexico ranked first in obesity worldwide in 2012. The figure is alarming, 7 out of 10 Mexicans over age 15 are overweight or obese and the consumption of "junk" food is a major cause of it. Children do not escape this catastrophe.
- 4. In the financial sphere, it was concluded from the bibliographic information that: The consequences of obesity have already exceeded the responsiveness of the public health system and is expected that 170 billion pesos (more than 13 billion dollars) will be required in six years to combat them, all the budget of the Health Ministry of the federal government.
- 5. The World Health Organization has called repeatedly to governments; federal, state and municipal levels, to develop comprehensive policies to combat obesity as fiscal measures are implemented to abate these indices. This is a multidisciplinary study in which some bases are proposed to establish a public policy that includes preventive and corrective legislative health measures and the implementation of taxes on companies that produce, market or advertise non-nutritious foods.
- 6. To great ills, great remedies: In the economic sphere, the bases are proposed to draft a bill for the establishment of a special tax on companies that produce, market or advertise junk products that damage the health of the population.
- 7. The literature review shows that taxes tend to cause changes in the consumption of certain consumer products; It supports the proposal emerged to establish a tax of 20% on food and beverages as a medium of shifting consumption towards healthier foods.
- 8. The duty will go to the health sector, specifically prevention programs and care for diseases and conditions caused by obesity, and somehow compensate the damage on health which may arise from the consumption of junk foods.
- 9. The purpose of the study is to generate reflection and academic debate on the obesity epidemic that is sweeping Mexico. Science is based on observation, comparison, conjecture and experimentation; here is missing the last part: It is required to conduct an investigation, both qualitative and quantitative, on the Laja-Bajio region (area of influence of the campus of the teachers who made this paper) in which figures and statistics on the consumption of junk food are provided, led by the number of hours in front of the TV,

and its impact on obesity -segmenting the population by ages- intended for school children in primary and secondary. A second phase of research will be directed to sectors over fifteen years old.

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