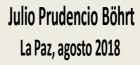


# **BOLIVIA**

# Overweight and obesity

REFLECTION ONLY OF THE EXCESS OF FOOD OR AN AGRICULTURAL SYSTEM IN CRISIS?



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#### I. PRESENTATION

This study is prepared on behalf of Fundación TIERRA under the project "Improving land governance in rural and indigenous communities of Bolivia, Ecuador and Peru: promoting the right and access to land-BOL 1052-SAM 1019 " Of Deutsche Welthungerhilfe, in order to analyze the evolution of overweight and obesity in the last 10 years in Bolivia, considering the socioeconomic causes that influence the subject.

It is generally argued that overweight and obesity is generated by an excess of meals as well as by the lack of exercises, which result in an increase in body fat, with a series of health effects. It is also argued that obesity is a chronic and complex disease that usually begins in childhood and adolescence with a genetic, socio-environmental and behavioral origin.

Overweight and obesity are increasingly expanding worldwide, not only in developing countries but also in developed countries, not only in countries with a neoliberal economic model but also in the countries of 21st century socialism.

But overweight and obesity is not manifested only by eating more but also there are other factors that affect it, such as, for example, the greater availability of certain foods, availability encouraged by the growing imports and opening of the international market; for the low prices; by agri-food systems that displace the production of healthy and nutrient-rich products for export products (commodity products); and by the implementation of erroneous government policies or the lack of adequate policies for healthy and nutritious consumption.

In Bolivia, until a few years ago, the main problem was malnutrition in all its forms. At present, although this has decreased significantly, in parallel the tendency to overweight and obesity has increased strongly. Now, in the country, these two problems coexist.

The analysis attempts not only to show the evolution of overweight and obesity in the country in the last 10 years but above all to analyze the causes that affect it, emphasizing the availability of certain foods, their origin, prices and necessarily in domestic production, fundamental aspects in the national agri-food system.

# II. ANALYSIS OF THE EVOLUTION AND SITUATION OF OVERWEIGHT AND OBESITY IN BOLIVIA

It is important to mention that the country has made efforts in recent years to reduce poverty and malnutrition, with remarkable successes. But just as it is clear that while malnutrition and hunger have declined in the country, the rates of obesity and overweight are increasing significantly

According to data from the National Health Surveys conducted in 2008 and 2016, overweight and obese people have increased in the last 8 years from 49.7% to 57.7%<sup>1</sup>, as shown by the data in table No.1

<sup>&</sup>lt;sup>1</sup> According to the Epidemiology Unit of the Ministry of Health, in 1997, people with overweight and obesity made up 21.1% of the total Bolivian population, in 2016 they represent 57.7%, that is to say that in 20 years it has almost tripled (2.73 times more) the population with overweight and obesity.

Table No. 1
Classification of the national population according to the Body Mass Index (BMI) (2008-2016)

·		, ,,
Clasificatón accordingto the BMI	2008	2016
BMI Average	25.8	26.9
Thin (BMI<18.5)	2.0	1.8
Normal (BMI 18.5-24.9)	48.3	40.6
Overweight (BMI 25,0 – 29.9)	32.3	32.1
Obesity (BMI > 30)	17.4	25.6
Overweight and obesity (4+5)	49.7	57.7

Source.- Built on the basis of INE data (ENDSA 2008 and EDSA 2016)

Between 2008 and 2016, the population classified as thin has decreased (0.2%) as well as people with normal weight by almost 8%, having increased in the same percentage, people with obesity, and staying in the same level, people who are overweight.

These percentages show in general that as the years pass by, there is a tendency in the country to increase obesity. According to data from the Ministry of Health (Epidemiology Unit, Ministry of Health and Sports) every year more than 65,000 cases of obesity and overweight are reported. In 2014, 60,658 were reported; in 2015, 71,541 were reported and in 2016, 75,290 cases, most of them located in the city of Santa Cruz, and then in Cochabamba and La Paz.

#### **III.THE POPULATION GROUPS STUDIED**

The various measurements and studies of the Ministry of Health on nutrition are carried out on social groups of young children and women based on different indicators such as anthropometric measures (weight / height, weight /age: age height) and the Body Mass (BMI); defined by the International Dietary Energy Consultative Group and recommended by WHO at the international level. This means that all countries apply the same methodology in these surveys and measurements.

#### a. Children

The situation of children in terms of overweight and obesity has a variable trajectory as shown in graph No. 1, between decreases and increases, especially in recent years.

If in the year 1989 children under 5 years of age with overweight and obesity represented 7.6% of the total; in 2016 they represent 10.1%, due to overweight (which pass from 6% to 8.2% in the

years considered)<sup>2</sup> and to a lesser degree due to obesity (which had an increase, but not as significant).

12 10 8 -Con obesidad 6 Con sobrepeso 4 Con sobrepeso y obesidad 2 0 1989 1994 1998 2003 2008 2016

Graphic No.1
Evolution of overweight and obesity in children under 5 years (1989-2016)

Source.- Built on the basis of data from the Ministry of Health

According to data from EDSA 2016, overweight and obesity is double in children under one year compared with the other age groups of children (classified between 12-23 months, 24-35 months, 36-47 months and 48-59 months).

The EDSA results also indicate several aspects to highlight:

- If the results are considered by department, it stands out that in Tarija it is where more overweight children are (9.5%) followed by the children of Santa Cruz (8.1%). But if we consider obesity, the trend is reversed: there are more children with obesity in Santa Cruz (2.6%) and then in Tarija (2.1%)
- Considering the analysis by regions, in the Valleys and Llanos there are more children with overweight (7.1%) and also with obesity because in the Altiplano, children with overweight represent 5.8% and with obesity only 1.7% (that is, half of the obese children that exist in the Valleys and Llanos).
- By sex, children are the most overweight (7.1%) with respect to girls (6.3%), and in terms of obesity, there is a light majority in boys (1.9%) than in girls (1.8%). %).
- By education of the mother, those who are more overweight and also more obese are children whose mothers have a higher level of education (7.3% and 1.9% respectively) while children with less overweight (2.6%) and lower obesity (1.4%) are those who have mothers without education, which draws great attention to the level of education and information that may be provided to mothers.
- By age of the mother, the results show that the younger the mother (15-19 years of age), the overweight children are less (5.8%) but there are more children with obesity (2.6%); whereas the older the mother (between 20-24 years or between 30-34 years), the overweight of children is the same (7.2%) and with slight variations in obesity (1.7% children of younger mothers and 1.4% of

<sup>&</sup>lt;sup>2</sup> According to World Health Organization (WHO) and Pan American Health Organization (PAHO), in 2016, the prevalence of childhood overweight reached almost 12% in Southern Africa, 11% in Central Asia, 10% in Northern Africa, 8% in North America and 7% in South America and Southeast Asia.

older mothers).

With regard to older children such as schoolchildren, the Global Survey of School Health (ESNUT 2012) indicates that overweight students (BMI> 25) represent more than a quarter of the school population, corresponding to female students the majority, as It is seen in the following table.

Table No.2
Overweight students (2012)

Students	% with BMI >25
Students in general	27.1%
Female students	25.3%
Male students	19.8%

Source.- ESNUT 2012

Similarly, recent studies of the School Nutrition Unit of the Municipal Government of La Paz indicate that the level of obesity and overweight of the students of the Fiscal Education Units in the municipality of La Paz is very high due to the consumption of espaguetis, sausages with french fries, soft drinks among others, and also the excessive consumption of wheat flour (pasta) mixed with fried. They registered that 21% of the students are overweight and 9% are obese, in the Educational Units of the Municipality (La Razón 03/20/2017).

#### b. Women

The other social group considered in the Surveys for the analysis of overweight and obesity is women between 15 and 49 years of age.

Among the measurements made in 2008 (ENDSA) and 2016 (EDSA), the nutritional status based on the Body Mass Index (BMI)<sup>3</sup> increased by 8.1%, since it went from 49.7% to 57.8%, as the following graph shows.

This means that over the past year, overweight and obesity have increased by more than 1%, which represents a fairly high annual growth rate.

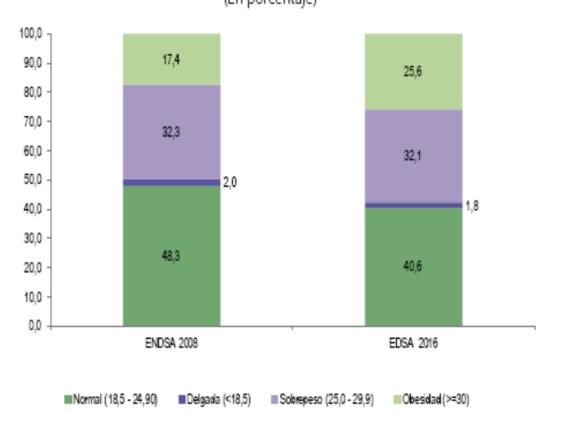
 $<sup>^3</sup>$  The limit values defined by the International Dietary Energy Consultative Group and recommended by the WHO, are between 25 - 29.9 = overweight; and more than 30 (> 30) = obesity.

Graphic No. 2

BOLIVIA: ESTADO NUTRICIONAL DE MUJERES DE 15 A 49 AÑOS, BASADO EN EL ÍNDICE

DE MASA CORPORAL (IMC), ENDSA 2008 Y EDSA 2016

(En porcentaje)



Fuente: Instituto Nacional de Estadística - EDSA 2016

This indicator of overweight and obesity (57.8%) is higher than the one in several countries of Central America such as Belize, El Salvador, Honduras and Nicaragua that hardly exceed 50% (Report of the Regional Program of the State of Guatemala, La Nación 5/I /2017).

From the point of view of age groups, graph No.3 shows that overweight and obesity increased between 2008 and 2016 in all age groups, especially between 40-49 years (increased 11.6%) and in lesser proportion between 15-19 years (increased 2.2%).

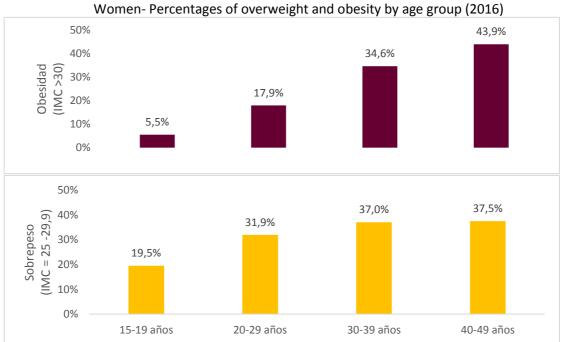
81,4% 71,6% 69,8% 63,5% 49,8% 42,3% 25,0% 22,5% 20-29 años 30-39 años 40-49 años 15-19 años Grupos de mujeres (por edad) 2008 **2016** 

**Graphic No. 3** Women-Evolution of overweight and obesity according to groups of ages (2008 and 2016)

Source: Built on the basis of EDSA 2016 data.

Analyzing in more detail the indicator of the year 2016, highlights that from 20-29 years, overweight and obesity increase very strongly compared to the previous section (15-19 years), especially in terms of overweight.

On the other hand, in the 40-49 segments, the main increase is due to obesity (43.9%), which exceeds overweight (37.5%), which does not happen in the other age groups; reaffirming the hypothesis that at an older age, greater overweight/obesity, as the following chart shows.



Graphic No. 4

Source: Built on the basis of EDSA 2016 data.

# c. Other features

¿And what other aspects characterize the overweight / obese population?

In the general population, there are several beliefs or myths with respect to food. It is generally believed that processed and "new" foods are suitable for food, and that being available in national markets, Bolivia has modernized and is part of globalization, because we consume the same as in other large cities.

On the other hand, it is thought that the consumption of inappropriate products is carried out by populations with less education, due to lack of information and instruction; or by young populations only; or populations that live in rural areas or in isolated and poor municipalities.

The results of the health survey (2016) show that inadequate nutrition is present in all populations, independent of socioeconomic status, location, age or training, among others.

According to EDSA 2016, women without any level of education represent 34.1% of overweight women, but 31.4% of women with higher education are also overweight.

From the rural-urban point of view, there is greater overweight in the inhabitants of the rural sector and low superiority of obesity in the urban sector. However, from the point of view of the regions, it is clear that obesity in the Llanos region is much higher than in the rest of the regions, while in the highlands there is more overweight, as the following table shows.

Table No. 3
Overweight / Obese women nationwide (2016)(en %)

Women 15-49 years according to	Overweight (25.0 - 29.9)	Obesity (=/> 30)	Total (Overweight + obesity)
Education level			
None	34.1	30.3	64.4
Primary	35.7	39.8	75.6
Secondary	30.6	21.8	52.4
Higher	31.4	20.3	51.7
Home			
Urban	31.7	25.8	57.5
Rural	33.1	25.1	58.2
Region			
Plateau	33.3	21.0	54.3
Valleys	32.0	23.9	55.9
Eastern plains	30.8	31.9	62.7

<sup>&</sup>lt;sup>4</sup> In the sense of being present in the markets, with some process of transformation, of not being usually produced internally, with sophisticated packaging, generally of external origin and components of a diet already universalized.

Degree of poverty of the municipality where they live			
High poverty	32.2	17.4	49.6
Medium poverty	34.7	27.8	62.5
Low poverty	32.3	29.3	61.6

Source.- EDSA 2016

Regarding the situation according to the degree of poverty of the municipalities, in the municipalities of medium poverty there are more people with overweight, while in the municipalities of low poverty there is greater obesity. Complement the information to know that in La Paz and Tarija there is a higher percentage of overweight women and that in Santa Cruz there is a higher percentage of women with obesity, also highlighting that Santa Cruz is the only department where obesity exceeds even overweight.

**Graphic No.5** Women (15 to 49 years) Percentage of overweight and obesity by departments (2016) 32,5% 35% 30,5% 27,4% 30% 24,0% 23,8% 22,6% 22,8% 25% 19,4% obesidad 20% 16,5% 15% 10% 5% 0% 36% 33,8% 33,6% 33,0% 32,9% 34% 32,4% 31,8% 32% 30,6% 29,1% 29,0% 30% 28% 26% CHU LPZ CBB ORU PTS TAR SCZ BEN PAN Mujeres de 15 a 49 años

Source.- Built on EDSA 2016 data

Finally, is it important to determine what factors or characteristics of mothers with overweight / obesity affect so that children have the same overweight and obesity? Is there a direct relationship between the status of the mother and the situation of the children?

The first question that emerge in this regard is: ¿are overfeed children that way because their mothers are also overfeed?<sup>5</sup>

Unfortunately, the EDSA does not offer these data<sup>6</sup>, so this report uses relationships between one variable and another of the previously mentioned data.

The only direct relationship found between one sector and another is to live in the <u>Eastern plains</u>, since most of the overfed mothers in the 3 regions are located on the Eastern plains, where most of the overfed children also live.

In the rest of the relationships there is no direct link, because:

- . Most of the overfeed children are located in the urban sector while most of the overfeed mothers in the rural sector.
- . The majority of the overfeed children are in Tarija while the majority of the overfeed mothers in Santa Cruz
- . Most overfeed children live in capital departmental municipalities while overfeed mothers live in municipalities of medium poverty.

#### IV. FOOD CONSUMPTION

As is already known, the prevalence of overweight and obesity is generated mainly by poor diet and lack of exercise or physical activity that allows you to spend the calories accumulated in the consumption of food.

But which are the foods that most influence overweight and obesity? In this regard, sugars, wheat flour, soft drinks, fried foods (potato chips, burgers, broaster chickens, etc.), fats and oils (used and reused again and again when frying in food stalls) and food stand out and imported ultraprocessed foods called scrap (boxed soups, sweetened potatoes, etc.).

According to data from health surveys, mothers in all ecological levels and according to income levels; rural-urban sector; and by departments, they have a consumption of fats and oils that stands out as recommended in 3.15 times more; and in sugars the consumption exceeds 20.1% (ENDSA 2008). On reverse, the consumption of legumes is very low (39.1%), as is that of milk (28.2%), and cheese and yogurt (38.4%).

In children under 3 years, also influences food<sup>7</sup>, especially breastfeeding is the most appropriate food for children of poor age. In general terms, breastfeeding between 2008 (ENDSA) and 2016 (EDSA) has decreased from 60.4% to 58.3%. While at the urban level it decreased from 53.7% to

<sup>&</sup>lt;sup>5</sup> The same question is also posed with the other indicators, such as: How many households are malnourished children with mothers who are overweight and obese?

<sup>&</sup>lt;sup>6</sup> Surely because the survey was applied to people and not to families.

<sup>&</sup>lt;sup>7</sup> According to the ENDSA (2008), in babies 6-8 months of age, 60% consumed daily foods with fat and sugars. In children 18-23 months of age, 88% consumed fats and sugars daily. Unfortunately, EDSA 2016 does not present updated data in this regard.

52.4%; in the rural sector it increased from 69% to 70.9% (EDSA 2016).

Then it can be concluded that while breastfeeding decreases in general terms, it increases the consumption of fats and sugars in pregnant mothers.

#### V. FACTORS THAT INFLUENCE FOR CONSUMPTION

It is important to identify the determining factors and the basic and direct causes that influence the population to demand certain products that affect the prevalence of overweight and obesity, not only for the purpose of informing the population, but also to rethink the availability of food (production, imports, prices) with social and other aspects as will be analyzed later.

#### The growing imports

The growing imports of food and raw materials for food production are one of the important causes in the increase of obesity and overweight, because they generate a wide availability in all regions of the country.

INE data on imports show that between 2005 and 2015 food imports increased 3.3 times in value and 1.3 times in quantity since they went from US \$ 242,970,000 to US \$ 803,694,000 and 835,904 tons. to 1,087,760 Mt, which means that there is a permanent increase in food imports and diversification; and on the other hand, an absolute lack of control because they are not subject to any regulation in terms of nutritional value.

For decades, wheat / wheat flour and derivatives have been by far the first imported product<sup>8</sup>, but about 15 years ago another group of imported foods emerged, the "prepared products", which are becoming more and more important each year.

According to a recent detailed study on the food situation in the country<sup>9</sup>, in 2005, wheat and wheat flour represented 20% (49.9 million US dollars) of the total value of imports, and Prepared Products represented 16.45% (US \$ 40 million). By 2015, wheat / wheat flour account for 18% (US \$ 143.9 million) while prepared products represent 21.59% (US \$ 173.5 million)<sup>10</sup>.

The two food groups - which have a strong incidence in overweight and obesity - represent almost 40% of the total imported by the country, and increase the availability<sup>11</sup> of food for the population in general.

Wheat flour increased its availability<sup>12</sup> from 41.6 kg / pers / year / average (2005) to 44.5 kg / pers / year (2015). This availability, which represents 124 grs / pers / day is very high for the

<sup>&</sup>lt;sup>8</sup> With subsidized prices to have a cheap bread, arriving this one to constitute the first food of the population since it allows "to fill the stomach giving a sensation of satisfaction". This, in turn, is used politically to keep wages and salaries low.

<sup>&</sup>lt;sup>9</sup> Prudencio J. 2017 "The agri-food system in Bolivia and its impact ..." from which the following analyzes are extracted.

<sup>&</sup>lt;sup>10</sup> Its value was multiplied by 4.3 times in those years, which on the other hand demonstrates the incipient that is the national food manufacturing industry, and the universalization of a consumption of foods alien to our eating habite.

<sup>&</sup>lt;sup>11</sup> The availability is calculated based on the production (+) imports (-) exports.

population's consumption and contributes to an inadequate diet due to the excessive consumption of bread, noodles and other pastas made with this product- therefore, an excessive amount of carbohydrates consumed.

The availability of prepared products, also called ultra-processed foods<sup>13</sup>, increased from 6.7 g / pers / day to 12 g / pers / day / average in the same years, that is, it had an increase of 179%. This is a phenomenon linked in part to the worldwide expansion of processed products -especially of Chinese origin- as well as the expansion of supermarkets in the last decade.

If we add to these products the availability of other products that affect overweight and obesity, such as sugar, for example, the problem gets worse.

Sugar has an increase in its availability since it went from 37.3 Kgs / pers / average in 2005 to 41 kgs / pers / year in 2015 (or what is the same from 104 grs / pers / day to 113 grs / pers / day). The WHO has just recommended that the adequate consumption of sugars be only 25 g/pers /day as much of the sugars are "hidden" in other foods not considered sweet, in ketchup or tomato sauce for example. (cited by Prudencio J. 2017).



 $<sup>^{12}</sup>$  For imports but also for the increase in the national production of wheat whose marketing is subsidized by EMAPA (in this regard see Prudencio J. 2017).

<sup>&</sup>quot;Ultra-processed foods are problematic for human health for different reasons: they have a very poor nutritional quality and, in general, they are extremely tasty, sometimes almost addictive; they imitate food and are mistakenly seen as healthy; encourage the consumption of snacks; advertise and market aggressively; and they are culturally, socially, economically and environmentally destructive. The penetration into the market of several of the main ultra-processed products is oligopolistic and is generally dominated by multinational companies. The growing concentration and domination of the world economy by large food companies raises serious concerns about its marketing power and its influence on consumers, as well as its political power vis-à-vis Nation-States and the consequent capacity to influence policies that affect the food supply and the consumption of food products "(FAO 2016." Map of hunger 2015 ").

While the mentioned products increase their availability per person / day, the essential products in the diet, such as legumes and fruits, present opposite situations.

In the same years considered, the legumes decreased their availability from 34 to 31.5 kgs /pers /year despite being recommended by the WHO / PAHO as fundamental products in the diet and health of the population due to their nutritional properties (they possess Vitamin B, minerals such as iron and calcium, fibers, help prevent diabetes, obesity, protect the heart and other properties).

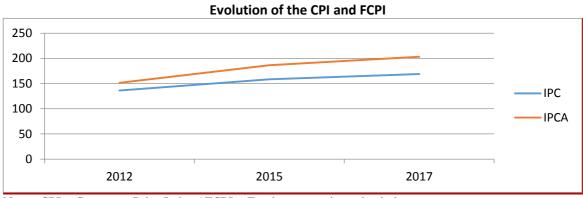
Fruits also decreased in their availability from 87 to 84 kgs / pers / year / average, that is, from 243 g / pers / day to 233 g / pers / day, being that the consumption recommended by the WHO for fruits is 400 grs / pers / day<sup>14</sup> as a minimum, foods that also serve to prevent diabetes and obesity. It highlights that this decrease in domestic supply of national fruits is inversely related to the increase in coca production, both in the Yungas area of La Paz and in the Chapare of Cochabamba.

The availability of tomatoes, another fundamental product in the adequate nutritional consumption of the population, keep stagnant at 6.2 kg / pers / year / average between 2005 and 2015. This stagnation was alleviated by the increasing imports and contraband of this product in in recent years, since national production fell brusquely due to the substitution of the cultivated area of the tomato for other more profitable and export crops (in this regard see Prudencio J.2015), especially in the valleys of the department of Santa Cruz (Comarapa, Samaipata, Vallegrande among others).

#### ii. The low prices

The factor of prices is another important element that drastically affects the consumption of food, the quantities consumed, frequencies and especially in the type of products consumed. And several aspects influence it.

In the first place, it should be noted that within the general consumption basket, the prices of the food item is the one that increases the most with respect to the other items, and at an increasing rate, as the following graph shows.



**Graphic No. 6** 

Note.- CPI = Consumer Price Index / FCPI = Food consumption price index

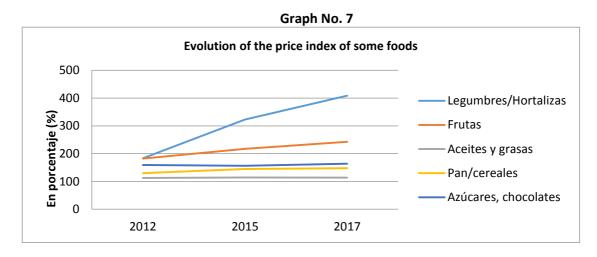
Source.- Based on data from the INE

 $<sup>^{14}</sup>$  According to the cited study, the recommended 400 g / day also includes vegetables and fruits. However, if we consider the availability of both products in 2015, it would only reach a total of 315 grams / day / pers. (85 grs of vegetables and 230 grs of fruits, that is 79% of the recommended for both products). This consumption is higher than the average consumption of countries such as Nicaragua and Haiti, but lower than the average consumption of countries in the Andean region such as Peru, Ecuador and even Mexico (WHO / PAHO / FAO 2017)

Second, it highlights that within the CPI Foods, the prices of the healthiest foods increase more than the prices of foods with bad calories (such as saturated fats, sugars or superprocessed products).

Thus, while in the period 2007-2012 the average price of oils and fats had risen by 112.68%; the breads/ spaghetti (based on wheat flour) at 129.62%; sugars / pastry at 159.09%; the richest products nutritiously as legumes / vegetables in 183.40% and fruits in 182.11%.

That trend continues in later years. By 2017, oils and fats increased by 114% and sugars by 163.75%; while legumes / vegetables in 408.85% and fruits in 242.64%<sup>15</sup>.



Source.- Built based on INE data

This price increase does not mainly benefit the peasant farmer <sup>16</sup> but rather benefits the extensive network of merchant intermediaries and the stores / supermarkets that now proliferate urban / suburban.

Accompany the previous trend, the structure of expenditure by urban households. Increase the expenses on products purchased for consumption within the home (legumes, vegetables, tubers, dairy products, meats, fruits) while reducing expenses on food outside the home (in restaurants, pensions, kiosks in the street) consuming mostly fried foods, chickens with french fries, hamburgers, sausages with french fries<sup>17</sup>, etc.

This trend has been taking effect for some time. An example is the situation of the year 2017. According to the INE, during the management of the year 2017, the price of food consumed in the home increased by 4.31% while the price of food consumed outside the home increased by 1.19%

<sup>&</sup>lt;sup>15</sup> A detailed study on the evolution of food prices (Juan A. Morales in the chapter on Determinants of Domestic Food Prices, in the report "Strategic Review of Food Security in Bolivia" UCB 2017) indicates that between 2008 and 2015 the national average price of products rich in saturated fats such as oil had increased by 14%; wheat flour at 4.5%, these being the products most consumed by households that are below the extreme poverty line. In contrast, in the same period, the national average price of lettuce more than doubled and onion increased by 79.4%.

<sup>&</sup>lt;sup>16</sup> Who continues to leave the field because his productive yields are the lowest in Latin America and the agriculture does not offer him enough income to subsist.

<sup>&</sup>lt;sup>17</sup>This situation is also manifested in some large rural locations as detected by some research (see "Eat from our land?", Fundación Tierra 2015).

**Graphic No. 8** 

Bolivia: cumulative variation in food prices consumed inside and outside the home (until IX / 2017)

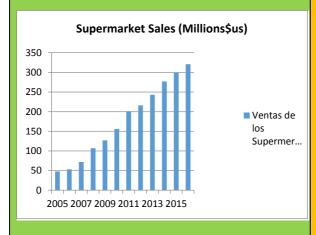


Source-INE

The government authorities consider as a great success of the economic model that people go out to eat out of the house more often, that the value of supermarket sales has increased and that people consume more chickens (fed with hormones and preparations of insane-fried way).

"..The family would not go out on Sundays to eat out and would not go to supermarkets if the economy had not improved...it would go to open markets where it is cheaper"

Luis Arce C. ex Minister of Finance (La Razón 06/15/2014)



Fuente: Ministerio de Economía y Finanzas. "Situación Económica en Bolivia 2016". La Paz

"There is an increase in the consumption of chicken meat, from 17 Kgs/person/year in 200 to 25.8 Kg/pers/year in 2013"
2013 Management Report of President Ev. Morales to the Bolivian People.

"Un 2014, the consumption of chicken person in Bolivia is 35,57 kgs...in the city of La Pareached 62.4 Kgs/pers/year" (Agroproductive Observatory of the MDRyT-La Razón 07/15/2015)

"In Bolivia the consumption of chickens nationwide rose in 2017 to 42.59 kgs/pers/year average (OAP/MDRyT-La Razón 04/17/2017) which means that Bolivia is the second country in ALT to consume chickens after Brasil (145 kg/pers/year) and above Venezuela (41/Khs/pers/year), Argentina (40 Kgs/year/per) and Peru (39/Kgs/per/yea) according to The Latin American Association of Aviculturists. (La Razón 04/17/2017)

# while:

	write:			
Average chicken consumption (			Obesity cases	"The consumption with high content of
				fats, sugar, salt and also fried and gaseous
	2005	17,00 Kgs/persona/año		mainly, are the causes for the increase of
	2013	25,80 Kgs/persona/año		the weight and the obesity A chicken
	2014	35,57 Kgs/persona/año	60.658	prey represents 300 c; a 350 c hamburger;
	2015	n.d.	71.541	a serving of fries 300 c. and a soda 150 c".

2016 42,59 Kgs/persona/año

75.290

Adolfo Zárate National Head of the Unit Epidemiology of the Ministry of Health and Sports. (La Razón, 09/18/2017)

Fte. OAP (MDRyT) y MSD

"The annual increase in the availability of one kilo of chicken person/day also implies -among other products- that 2,090 new cases of obesity and overweight are reported per year, between 2014 and 2016". (Adolfo Zárate / UE-MSD)

# iii. Other aspects

The overweight and obesity that is characterizing the country, ¿is a reflection or result only of the large amount of junk food available in the markets / stores (stalls selling food); of the great quantity and variety of imported foods uncontrollably; of the expansion of the supermarkets in all the neighborhoods of the cities and of the low prices of the insane products, or in addition there are other factors that are not perceived?

Certainly there are other additional factors that affect the subject and that should be analyzed carefully, such as the *accelerated process of migration and urbanization* that the country is living, and that forces the inhabitants to leave early from home (to work or looking for work) and because of the distance and remoteness, they return to their homes only at night, which forces them to eat any food that is on the street, usually chickens and fried. When we return to the house at night, weary, there is no time to prepare a typical meal so we only heat up some precooked food.

If that adds to the *commercial advertising* by the various media regarding the offers of supermarkets<sup>18</sup> and the prestige that goes to these centers ("food courtyards") to buy; and plus government incentives to consume more chickens and fried foods, and families go out to consume more in the streets and supermarkets as a sign of well-being and progress; in Bolivia we have a wide spectrum of reasons for consuming more insane food.



<sup>&</sup>lt;sup>18</sup> For example, the persuasive competition between the Ketal and Hypermaxi supermarkets on national TV is even ridiculous, each of them more and more sophisticated in their food sales propaganda.

Finally, there is one last aspect that influences the excess of meals and that one should not stop inquiring and mentioning: ¿Does the overweight and obesity of older people, will not also be the result of greater anxiety that is taking over the population of middle-income (and low)<sup>19</sup> who wants to have what the high-income population has, and they want to do what high-income families do, and how they can't do it, take refuge in that anxiety to consume?

It is very true that in recent years, in the country there is a decrease in poverty and the increase in the population that entered the middle class due to the series of annual increases in salaries, in the social benefits, among others factors. Therefore, there is a greater possibility of increasing the consumption of goods, including food. However, there is a scarcely analyzed aspect and it is related to the growing inequality that has been created (and is intensify) between a social sector that already had very high incomes and that continues to increase due to the current economic policies (mining sector, financial sector, agribusiness and those linked to transnational corporations, among others) and the middle and lower class sector.

According to specialists, the greatest inequality has a psychological or mental cost. As there is greater inequality, there is greater social competence and also greater divisions; therefore, there is greater social anxiety, there is greater stress, there is a greater incidence in mental illnesses (as there is greater dissatisfaction and greater resentments). This in turn can generate more drug use ... or various addictive behaviors (more purchases in supermarkets ...? ... more food consumption offered by the globalized market ...? ... more consumption of foods that give a sense of well-being ? ... more sugary and soda drinks ...?).

### **VI. BRIEF CONCLUSIONS**

- Overweight and obesity are mainly due to the fact that every time in Bolivia, less (relatively) basic products are produced; that crop diversity is being lost; due to the emphasis producing only export merchandise (commodities); that there is no state support to produce traditional "healthy" foods; and that the temporality and alternation of crops is being lost, all of which influences the disconnection with traditional nutrient-rich eating habits.
- To this must be added that there is a strong influence to consume "universal diets" or ultraprocessed foods, that means that Bolivia is already inserted in a process of homogenization and universalization of consumption patterns (alien to traditional habits) and that the control of these patterns is in the hands of erroneous public and market policies, which discourage the diversification / production of high nutritional value native foods and the valuation of our genetic resources.
- Add to that the growth of the middle class that has more money and tries to imitate models of food consumption from other countries, models that do not correspond to our eating habits.
- Contributes to the above, the strong deregulation of the market. In Bolivia, all kinds of food come in: whether processed or for direct consumption, legally (imports) or, above all, illegal

<sup>&</sup>lt;sup>19</sup> The same questioning for high-income families who want to imitate the lifestyles (and consumption) of families in developed countries, and not being able to do so fully, begin to consume what that market poses (managed by the transnationals especially).

(contraband), even without sanitary control.

- The national government does very little to stop the above-mentioned. No stop the imports or at least not taxed to those junk products, sugary, sweetened, gaseous, to discourage domestic consumption.
- There are also no regulations to the publicity that the merchants of these products have disengaged, nor to the supermarkets and stores that sell these products.
- It does not offer alternatives to that middle class to invest the financial resources it now has in adequate food of national origin.
- Education and training in food-nutrition in schools is totally insufficient. The consumption of healthy foods is not promoted.
- The support provided by government policies to the basic food producing sector is totally insufficient. There is no support (with credits, training, technical assistance, adequate seeds, subsidies ...) to family farming that produces "healthy" foods (vegetables, fruits, pulses). The only significant support is agricultural subsidies to wheat, which are actually subsidies to marketing and not to production, so we continue with productive yields so low and depending on imports.
- The government is more concerned with export products, transgenic products and now with ethanol produced by the agro-businessmen from the east in their mono production systems and not with the production of staple foods.
- These public policies and business corporations especially from the East (CAO, CAINCO, ANAPO ...) are promoting the agro business by producing merchandise products (flexible commodities flex crops) that can be used simultaneously for different uses: fuels, livestock feed and food humans. This is the new pattern of the renewed modern universal agrarian regime focused on the accumulation of capital and not on the adequate satisfaction of the food needs of the population.
- Change this situation requires very radical proactive public policies that have to do with the redistribution of land, changes in productive agricultural systems, recovery and strengthening of land suitable for agriculture, adequate soil management among others, and support decided to the domestic production of basic foods, produced by the family economy. And finally, promote the consumption of healthy national foods.

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