

The state of food security in Venezuela: an evaluation of 1989-2007 period



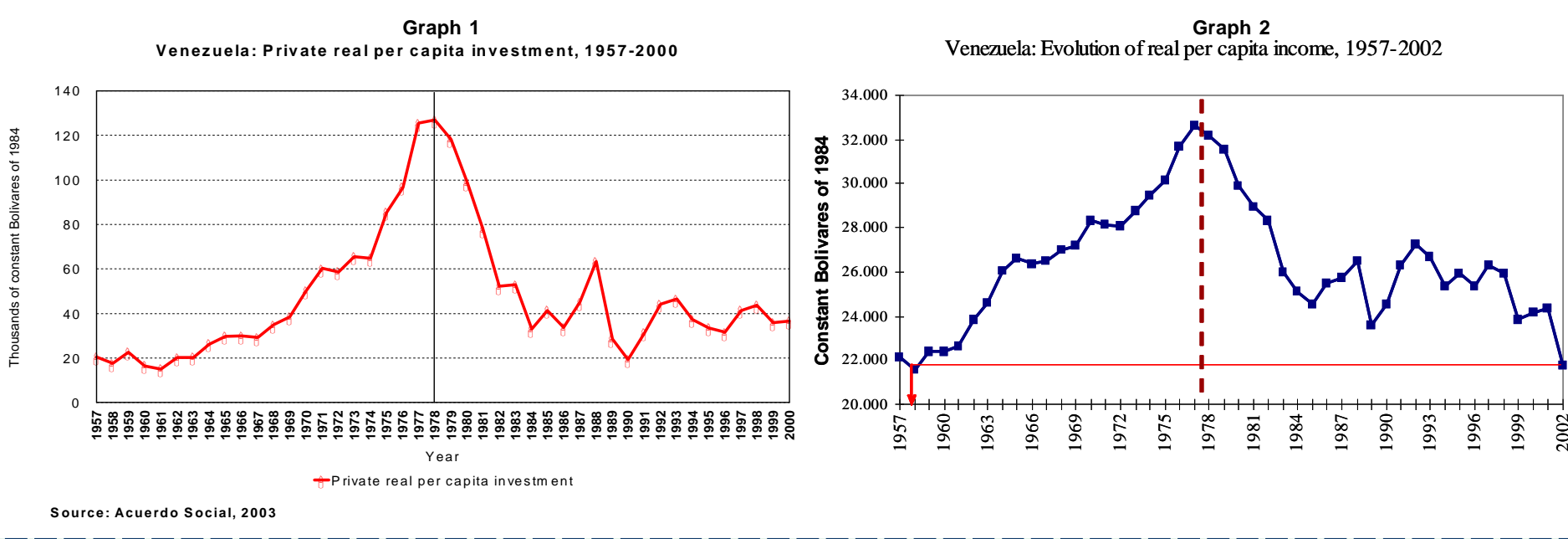
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1. Introduction :

Venezuela, a country with around of 912.000 km² an almost 28 million of inhabitants) experienced deep changes in the territorial, political, social and economical scope during the XX Century. Since a rural and farmer economy which prevailed until almost 1940 decade, it became in a urban country with growing modernity demands. Those changes were promoted mainly when after being an agricultural exporter economy, Venezuela became an oil exporting country. After continuous improvements in the terms of partition of industry profits between government and foreign oil companies, the level of public income significantly increased until finally, in 1976, the oil industry was nationalized. This success rebounded in favorable way in the public expenditure level, producing a dynamic effect on all the Venezuelan productive sectors and increasing the living level of the Venezuelan average habitant.

Until the beginning of 1980's decade it showed a clear growing tendency in food consumption. However, this situation began to change when the contradictions related with the capitalist accumulation model based on oil rent became evident, forcing the country to introducing important changes in policies and functioning forms of its economy (Anido and Gutiérrez, 1998). The most important effects can be observed in the food and nutritional deterioration of Venezuelan people, measured by the Food Consumption Availability (FCA) per capita at retail level. The main reasons which explain this result were the decreasing values of domestic food production as well as the intermittent behavior of food imports levels along these years, as a result of persistent devaluation practices of exchange rates and the resulting deterioration in the terms of trade. However there were some slight improvements in the food situation at the beginning of 1990's decade, as consequence of the implementation of the Structural Changes Program based mainly in control reduction and trade opening.



A 47 years of democratic era (1959-2006), characterized by an increasing stage of investment and GDP (until 1978), followed by a deep decreasing stage -with huge oscillations-, until present time. It revealed the need of adjustments, adopted according to different scopes and political orientation.

2. Objectives :

- To describe and to analyze the main changes in economical and agro-food variables, especially in food domestic production, food consumption and food imports in the Venezuelan case, as well as the main effects of public policies on the food security situation of the country. The research focused on the 1989-2007 period.

3. Methodology :

Sources of information :

- Planning Ministries and Development of different periods (global and sectoral economic policies and economic goals); macroeconomics variables and food availability, consumption and security variables (Statistical database of Economic Commission for Latin America and Caribbean, ECLAC-; Yearbook and annual figures of Agriculture and Land Ministry (and its equivalent); Statistical databases of Central Bank of Venezuela; Food Balance Sheets of National Institute for Nutrition and Universidad de Los Andes; Statistical data from secondary sources (e.g. «Cuantitativa Bases of Venezuelan Wealth» of A. Baptista-); own calculations based on primary sources of information.

Indicators (variables) :

- Economic policies goals; macroeconomics variables (Gross Domestic Product, GDP; real income; inflation indexes) and food production (Agricultural Added Value and Agricultural GDP); Food Consumption Availability (FCA) and food security variables and their growth's rates (Weight-for-Height, Height-for-Age and Weight-for-Age coefficients, corresponding to children under 15 years old); at aggregate and per capita levels.

5. Main effects on economic, food and nutritional indicators :

5.1. Concerning to the main macroeconomics-social indicators :

Due to severe increases in relatives prices of food (since 2001, at consumer level, where food prices IPC_{ABT} raises quicker than prices of all goods and services, IPC_{AG}), Consumer's real income tends to decline. For instance, in 2001 IPC_{AG} was 12.5, while IPC_{ABT} was 16.1; in 2007, while IPC_{AG} grew up at 18.7%, IPC_{ABT} increased at 26% (similar results can be found between both years). As a consequence, there is a re-assignment in the final expenditure of Venezuelan consumer on food. However, in recent year such trend seems to reverse: between 2003-2009, real income increased at 9.9% (after the strong fall of 2002-2003 period).

5.2. Concerning to the main variables of food availability :

In all variables shown in Table 1, it can be seen similar behavior as inverted "U" curves. They describe a increasing trend until 2001 in harvested surface and domestic food production (in aggregate values and also by sub-sectors: Vegetal, Animal or Fishery). Between 2002 and 2004 period, such variables begun to decline, and then they take up again the increasing path. At the en of the 1990's decade, such behavior could be explained based on trading policies adopted. Probably the elimination of prohibitions and import licensing, together with two strong devaluations during the five-year period (1994-1999) and the inflationary process persistent in this period, favored food imports; at the same time there was an increase in internal production costs, and severe differences between internal and international prices. In recent years, even domestic production (according to official figures) is increasing, imports are also arising spectacularly (they jumped since 1.958 US\$ millions in 2001 to 3.600 in 2006; i.e., 184% in 5 years, with increasing trend except for 2002). Part of such augmentation can be explained by the improvement reached in food purchasing power, and also due to higher prices in international markets.

Table 1
Venezuela: evolution of main variables in agrofood system, 1989-2006

Year	Agricultural GDP (MMBs. of 1984)	Harvested surface (ha) (t)	Vegetal production (MMBs. of 1984)	Animal production (MMBs. of 1984)	Fishery production value (MMBs. of 1984)
1989	25.837	2.042.309	13.909.263	13.700	17.885
1990	25.483	1.950.824	12.976.401	13.418	17.434
1991	26.111	2.003.798	13.769.840	14.578	18.463
1992	26.639	1.781.524	13.839.144	14.019	19.684
1993	27.445	1.856.894	13.771.943	14.418	20.626
1994	27.142	1.698.076	13.664.744	15.361	19.038
1995	26.995	1.677.979	13.475.111	15.858	20.089
1996	27.526	1.620.523	13.902.054	16.533	20.765
1997	28.186	1.668.725	14.288.482	17.538	21.670
1998	28.356	1.605.326	16.041.964	17.662	21.747
1999	27.748	1.585.033	16.619.923	18.140	21.645
2000	28.420	1.806.437	17.893.889	19.976	23.335
2001	29.166	1.837.114	18.014.673	20.128	24.941
2002	28.864	1.593.510	16.688.532	18.940	25.480
2003	29.053	1.671.084	16.582.304	18.302	21.712
2004	66.378	1.969.722	NA	18.742	19.302
2005	160.679	2.041.888	NA	19.173	19.263
2006*	366.668	2.057.326	NA	19.671	20.727

Sources: BCV (several years); FEDEAGRO (2009); own calculations.
(* Estimated values, based on real increasing rates of FEDEAGRO (2009) and BCV (2009).)

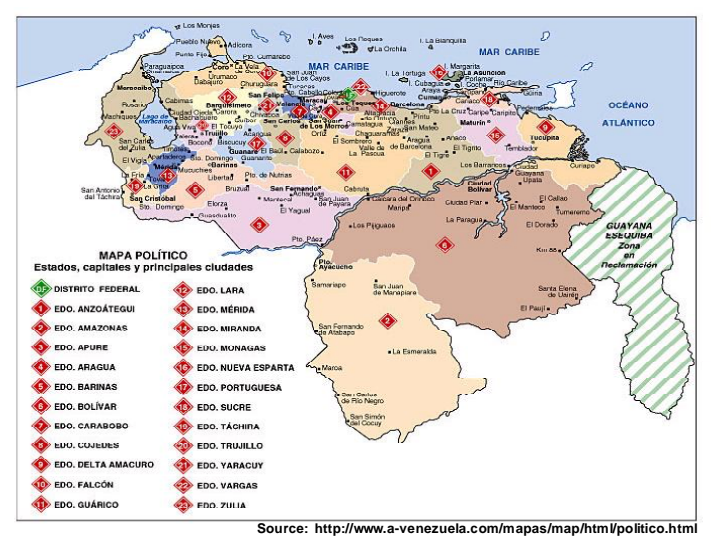


Table 3
Venezuela: national income distribution among families, 1962, 1989-2006 (measured in % by percentil)

Year	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	5% richest
1962	1.09	2.42	4.38	7.20	11.18	16.74	24.62	36.31	55.76	72.79	27.21
1989	1.23	2.59	4.52	7.28	11.18	16.64	24.42	36.02	55.58	72.89	27.11
1990	1.18	2.44	4.27	6.92	10.72	16.11	23.89	35.64	55.82	73.98	26.02
1991	1.12	2.38	4.25	6.99	10.92	16.51	24.58	36.79	57.77	76.35	23.65
1992	1.29	2.81	4.94	7.94	12.08	17.79	25.81	37.54	56.83	73.35	26.65
1993	1.39	2.92	5.04	8.01	12.09	17.74	25.68	37.6	56.68	73.36	26.64
1994	1.21	2.51	4.39	7.10	10.91	16.27	23.93	35.37	54.69	71.92	28.08
1995	1.17	2.45	4.31	7.01	10.84	16.25	24.01	35.63	55.37	72.99	27.01
1996	0.95	1.90	3.38	5.66	9.05	14.03	21.39	32.79	53.09	72.42	27.58
1997	0.96	2.09	3.81	6.37	10.06	15.34	22.95	34.44	54.09	71.85	28.15
1998	0.93	2.16	4.04	6.86	10.7	16.22	24.10	35.7	55.14	72.76	27.24
1999	1.06	2.53	3.57	4.60	5.84	7.30	9.03	11.69	16.57	37.80	62.20
2002	1.00	2.46	3.49	4.59	5.78	7.22	9.15	11.91	16.91	37.48	62.52
2004	1.19	2.77	3.89	4.92	6.19	7.83	9.51	12.24	16.82	34.85	65.15
2005	0.90	2.52	3.67	4.83	6.10	7.55	9.37	11.93	16.35	36.78	63.22
2006	1.51	3.05	4.14	5.27	6.42	7.89	9.71	12.16	16.42	33.43	66.57

Note: data for 1993-1998 concern to the second semester of each year.
Source: Baptista (2001), ECLAC (2009)

Table 4
Venezuela: Prevalence of malnutrition in child population, 1990-2006 (%)

Year	Weight-for-Height (WH)	Weight-for-Age (WFA)	Height-for-Age (HFA)
1990	16.06	24.77	31.08
1991	13.66	22.52	30.42
1992	12.75	20.28	30.29
1993	12.17	18.22	28.43
1994	11.44	17.87	28.65
1995	11.57	13.88	29.75
1996	11.89	19.58	27.96
1997	11.6	19.64	30.8
1998	12.51	20.06	29.95
1999	11.74	18.79	29.1
2000	10.91	17.67	28.04
2001	12.25	18.37	27.92
2002	12.92	18.93	27.89
2003	13.62	19.95	28.39
2004	13.82	19.79	27.96
2005	12.99	18.39	27.23
2006*	12.48	11.29	25.63

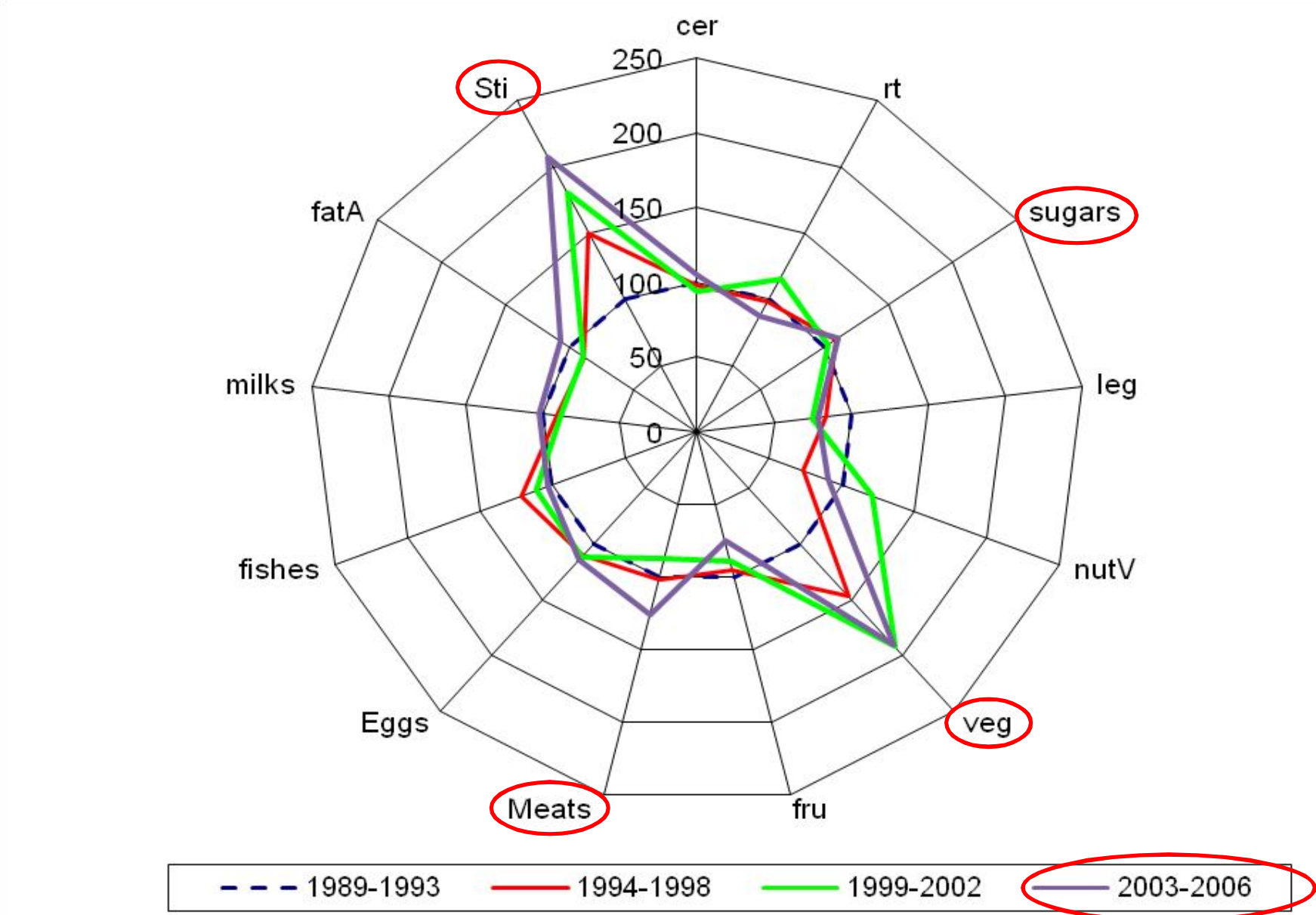
Note: INN (several years).
(* Values are preliminar estimations for 2007 (2006 data is not available).)

Table 2
Venezuela: average of food consumption availabilities, FCA (calories) by food's groups, 1989-2006 (number and percentage of total FCA, by presidential periods)

Food group	1989-1993				1994-1998				1999-2002				2003-2006			
	1989	1990	1991	1992	1994	1995	1996	1997	1999	2000	2001	2002	2003	2004	2005	2006
Cereals (cer)	970	955	921	913	98.4	95.3	97.0	98.2	95.3	97.0	98.2	95.3	97.0	98.2	95.3	97.0
Roots and tuber dry (rt)	125	123	145	110	5.5	5.5	6.5	4.6	17.4	16.5	16.5	17.4	16.5	16.5	17.4	16.5
Sugar and sweeteners (sug)	358	389	365	384	15.6	16.1	14.1	15.1	17.4	16.5	16.5	17.4	16.5	16.5	17.4	16.5
Legumes (leg)	50	42	37	40	2.2	1.9	1.7	1.7	1.9	1.7	1.7	1.9	1.7	1.7	1.9	1.7
Nut and oilcrop seeds (nuts)	2	1	2	2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Vegetables (veg)	15	21	28	26	0.6	1.0	1.3	1.2	1.3	1.2	1.2	1.3	1.2	1.2	1.3	1.2
Fruits (except plantain) (fru)	105	100	94	80	4.6	4.5	4.3	3.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Meats	144	147	166	181	6.4	6.6	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Eggs	19	21	21	22	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fish and shellfishes (fish)	15	15	15	15	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Milk and derivatives (milk)	141	127	131	144	6.2	5.7	5.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Visible fats (fat)	386	340	340	411	17.0	15.2	15.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
Spices	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stimulants (st)	16	24	30	33	0.7	1.1	1.3	1.4	1.3	1.4	1.4	1.3	1.4	1.4	1.3	1.4
TOTAL FCA (% of calories)	2,264	2,231	2,217	2,391	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: INN-ULA (Several years), INN (several years), own calculations.

Graph 3. Venezuela: changes on food patterns of calorie intake, 1989-2006



5.4. Concerning to food habits :

Due to severe increases in relatives prices of food (at consumer level, where food prices raises quicker than prices of rest of goods), Consumer's real income tends to decline. As a consequence, there is a re-assignment in the final expenditure of Venezuelan consumer on food.

The discontinuous blue line in Graph 3 (and Table 2) shows the reference period (1989-1993). Other lines point out how cheaper food consumption tend to increase along 1990's and 2000 decades (except for Fishes case, which initially had increase).

4. Main policies, according to presidential period :

4.1. Structural adjustments (1989-1992, Carlos Andrés Pérez II) : Freeing prices of goods, Goods and services opening markets, Floating foreign exchange system (flexible and unique); Financial reforms; Stimulus for foreign investment, deep Privatization program (basic industries, public services, etc.); Agri-food sector subsidies elimination or substitution; Agricultural portfolio reduction; supported prices to protect agricultural domestic production.

4.2. Non-orthodox and Orthodox adjustment (1994-1996 and 1996-1998, Rafael Caldera II) : Emergency measures to face the widespread financial crisis -two episodes in 1994-; Foreign exchange control (until April 1996); Enrollment in the World Commercial Organization (1995), Group of Three and other regional integration; agreements ; Practice of fixing minimum prices in some agriculture goods; *Social programs*: Strategic Food Program (PROAL) and School Food Program; The Venezuela Agenda (1996), oriented to economic equilibrium and fight against inflation (Floating exchange rate = no more exchange control, Interest rates' liberalization, Public expenditure discipline -but without forgetting social matters-, Taxes increase).

4.3. The Bolivarian Revolution (first stage, 1999-2003) : Institutional reform (Constitution process and New national Constitution, 1999-2000) to "achieve sustainable and diversified economic growth, reduce inflation and increase the employment level, through fiscal and monetary policies" The National Economic and Social Development Plan 2001-2007 (to achieve 6 main goals); The missions (or «Misiones», in Spanish: Robinson, Sucre, "Barrio Adentro", Identity, MERCAL, «Negra Hipólita»; Consejos Comunales, Endogen Development Modules...); Tax reduction (VAT and Billing Debit Tax); Plan Bolívar 2000; flexible foreign exchange as instrument for inflation control; Strategic Food Program; «Cesta-ticket» or food-bond for wage-earning workers; Augmentation of the list of tariffs-quotation goods; NFS application as mechanism for protecting domestic production.

4.4. The «XXI Century Socialism» (second stage, 2003-2007) : Price control in agricultural and transformed goods, and foreign exchange control; creation of MERCAL, a network to trade and to market food products and basic product at low prices (as a subsidy policy geographically focalized), together with the Corporación de Abastecimiento y Servicios Agrícolas (CASA); National Plan of Sowing; Increasing role of State in the economy, especially in producing goods and services; severe increase in debt, especially domestic debt, despite of the increasing level of oil prices and State's incomes; tax reduction (VAT); Sign of The Adhesion Protocol to MERCOSUR (2005), but also resigning to the Andean Community of Nations (2006); Land and Agricultural Development Law instrumentation, through land expropriation or compulsory purchase-stationization of production units; unsuccessful attempt for Constitutional Reform (2007).

5.3. Concerning to the childhood nutritional situation :

As shows Table 4, the three indicators pointed out show that during the 1990-2001 period, there was a clear decreasing trend in the percentage of children in situation of malnutrition. However, between 2002-2004, during and after the oil-strike and their severe effects on domestic economy, these indicators moved back. Since 2005 the increasing trend was recovered, mainly due to the social policy of government through the Missions, extended price's control and governmental importations as mechanisms for assure food availability and food access in the poorest stratus of Venezuelan population (see Table 3, that shows smooth improvements in the income distribution).

6. Conclusions :

- Three different kinds of policies can be distinguished along the studied period: Structural adjustment or orthodox (1989-1993); non- orthodox and orthodox measures (1994-1998) and "mixture" of policies (1999 until present).
- There were a strong decreasing trend in GDP, as well as in private investment, in per capita real income; in contrast, an increasing trend can be observed in the agri-food GDP.
- During 1989-1993 and 1994-1998, there was a strong link between "food Import" and "food availabilities". It changed in the 1999-2006 (agro-food GDP is now very correlated), but food imports still increasing every year to compensate the loses in domestic production of food.
- Irregular behavior in de FCA along de 1989-2006 period; however during FCA grew up in the 1989-1992; drop in 1993-1998 period and trend to increase since then until present (except for 2006).
- Due to the high relevance of prices, income level and income concentration, the food energy (kilocalories/person/day) and nutrients intake had markedly deteriorated in the poorest stratus of Venezuelan population. Anthropometrical indicators of child population along 1990's decade reveal an increasing number of children below the standard values for Venezuela, as well as a very heterogeneous nutritional situation among states/regions. Even an important decline in the infant nutritional indicators was registered at the end of 1990's decade as well as in 2000 decade, there still persist non desirable values (e.g., in HfA at national level). Special attention is needed in case of Amazonas state.
- Preliminary data for 2007 seems to indicate some deterioration in variables as FCA, income distribution and anthropometrical indicator of children under 15. Such situation, despite no more recent data availability, suggest a food insecurity risk along the studied period, especially in the poorest people, despite the moderate success reached by social programs of government, especially the so-called "Misiones" (Missions) that cover different axis of social and welfare policies.
- Finally, significant behavioral changes in the Venezuelan consumers were also found. They keep food intake level by reassigning their expenditures, as a mechanism to face up to a situation characterized by a constant increase of food prices and decreasing (of real values) of their income (e.g., augmentations in vegetables, stimulants, meats -chicken, mainly- and sugars).