ABSTRACT:

Focusing on micro censuses data and national surveys, we examine in detail the households formation according to demographic and economic aspects. To achieve this purpose we explore household situation up to present using factorial analysis and logistic regression. In this respect, there is a bipolarity-shaping household conformation. There is not a single pattern to define the households composition. In short term, Venezuela has been living the demographic transition process; however, there is an economic development lethargy affecting residential patterns. First, the non-nuclear households, especially the extended multigenerational household formation (3 or more generations) as emerge strategies from the most disadvantaged population and, on the other hand, nuclear households where the average size is determined by fertility decline. Under these complexity scenarios, we analyse factors to understand the pace of this changing from socio-demographic point of view.

KEYWORDS: Households composition, extended households, housing, housing demand.

HOUSEHOLDS AND HOUSING IN VENEZUELA

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BRENDA YÉPEZ MARTÍNEZ
DEMOGRAPHIC STUDIES CENTRE (BARCELONA, SPAIN)

JULIAN LÓPEZ COLÁS
DEMOGRAPHIC STUDIES CENTRE (BARCELONA, SPAIN)

JUAN ANTONIO MÓDENES CABRIZO
DEPARTMENT OF GEOGRAPHY, AUTONOMOUS UNIVERSITY OF BARCELONA (SPAIN)

I. INTRODUCTION

Recent decades have generated significant changes in Venezuelan population dynamics[1]. This dynamic is mainly due to the life expectancy prolongation, first union postponement, cohabitation intensification, fertility decrease and in the last decade differential migration. Thereby, all of this affects the structure and pace of population growth, particularly affect the number of households and residential patterns. Therefore, Venezuela households transformation is determined, on the one hand, by demographic trends, and on the other, homes and social dynamic system are affected by multiple economic contingencies. For instance, from nuclear to extensive household transformation has become a survival strategy to optimize revenue and resources. In this regard, multigenerational household conformation (3 or more generations) is related to socio demographic complexity. Unlike industrialized countries where householders living alone had become a common specific household type and during the twentieth century, the number of households has been growing faster than population growth

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[1] See Annex

(Coleman & John, 1992), in Venezuela 34% of household population in 2001 was living in extended households. In this mutant scenario arises this research; the interest on households is mainly because, to our knowledge, household demography studies and household projection it is a new topic in the Venezuela research work.

The purpose of this research is divided into three main related parts of which only two are presented here. First, we examine the evolution and current situation of Venezuelan households structure, later we project the number of households to 2016, and finally, we determine the potential housing demand. Three parts clearly linked to demography factors.

II. EVOLUTION AND TRENDSETTERS

The first part is focused on household complexity. We study the households composition evolution using the last three censuses and recently national surveys. We analyse the households structure and size changes focusing on essential features or the underlying meaning to determine whether there are new patterns. In this regard, the objective in this part is examining Venezuelan household conformation since 1971 up to present and analysis of factors leading to extensive households in Venezuela.

Household reference person evolution (1971-2001)

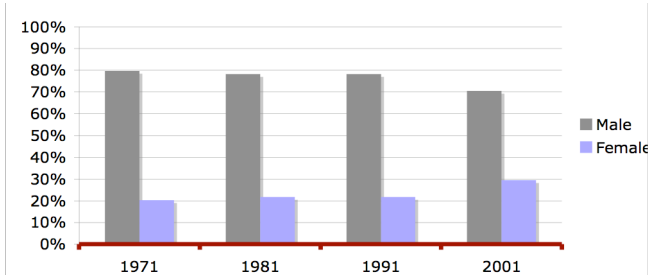Chart 1: Reference Person Sex. Venezuelan Census 1971-2001.

Chart 2: Reference Person Marital Status. Venezuelan Census 1971-2001.
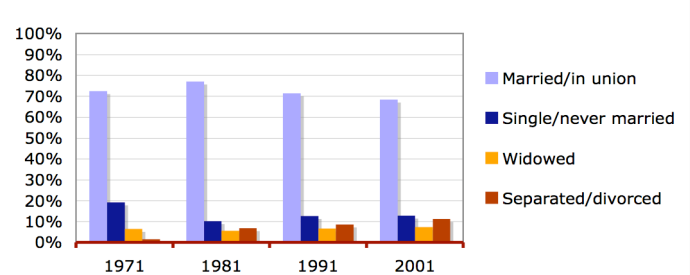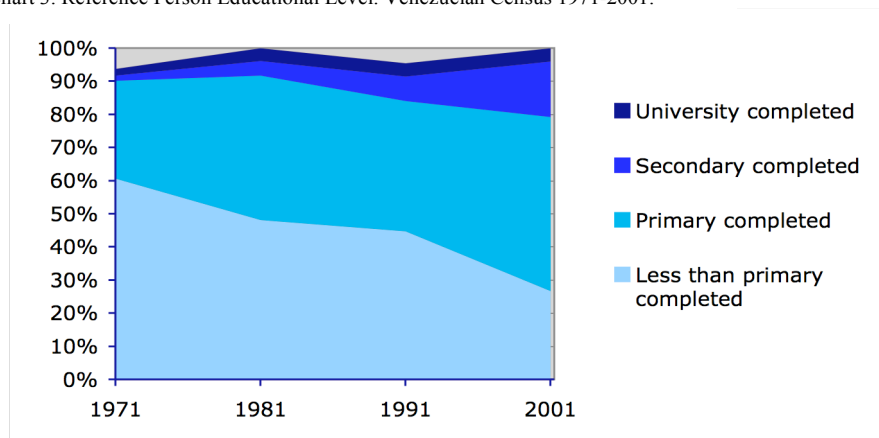

Chart 3: Reference Person Educational Level. Venezuelan Census 1971-2001.

One can observe that reference person have undergone some changes as: reached higher educational level, there has been a considerable increase of female reference person, and households with married heads are falling slowly to introduce a slight increase of reference persons divorced or separated.

All this linked with fertility decline, the household size fall (93% of private households population in Census 2001 live in homes less than 8 persons), the increase in cohabitation, among others, give as result a mixture between first and second demographic transition factors; e.g. without completing the first demographic transition is beginning to observe intrinsic characteristics of the second one. This we called ¨Among Transitions¨.

Chart 4: Reference Person Age. Venezuelan Censuses 1971-2001.
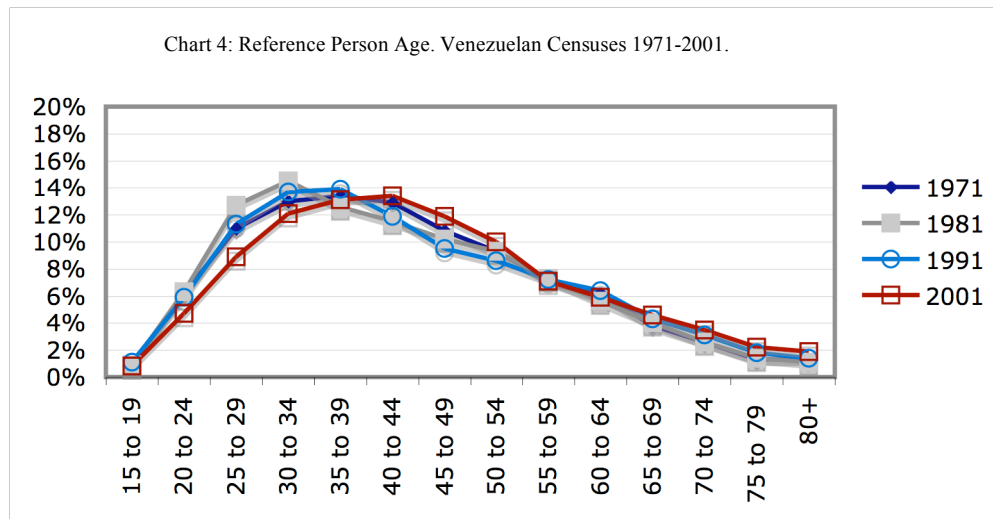
In Census 2001, the reference person households decline under 40 years old and increase in older ages, this situation leads us to believe that there are some factors that influence large homes conformation avoiding the new households formation. Based on this premise, we examine the socioeconomic characteristics in nuclear and extended households.

III. FIRST RESULTS

Hereinafter we identify homes profile using a multivariate data analysis. Specially, using an exploratory technique designed to analyze multiway tables so-called Multiple Correspondence Analysis (MCA). The results allow one to analyze pattern of relationships of numerous categorical variables by exploring the structure of all the variables included in the table, similar in nature to those produced by Factor Analysis techniques. Then, the analysis was conducted by a model that intended to study the guidelines of the extensive households.

Factorial Plane 1. Nuclear Vs. Extensive Households. Educational issues. Venezuela. Census 2001.

Factorial Plane 2. Nuclear Vs. Extensive Households. Economics issues. Venezuela. Census 2001
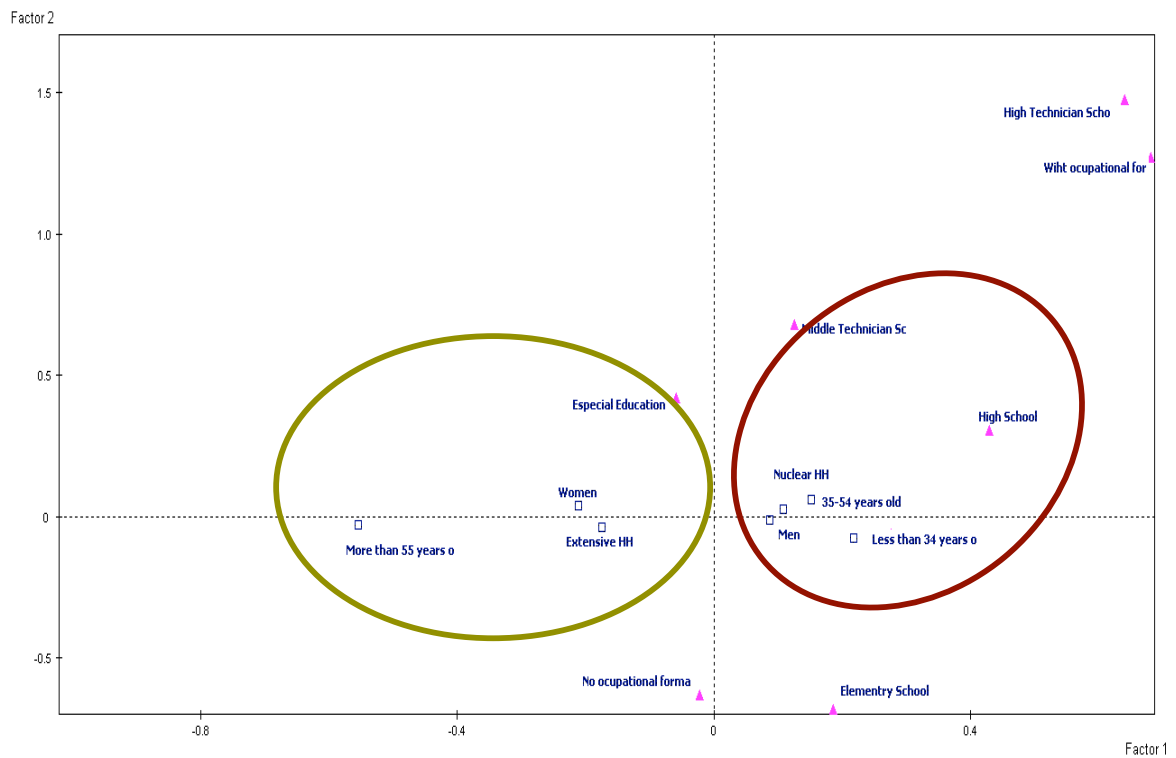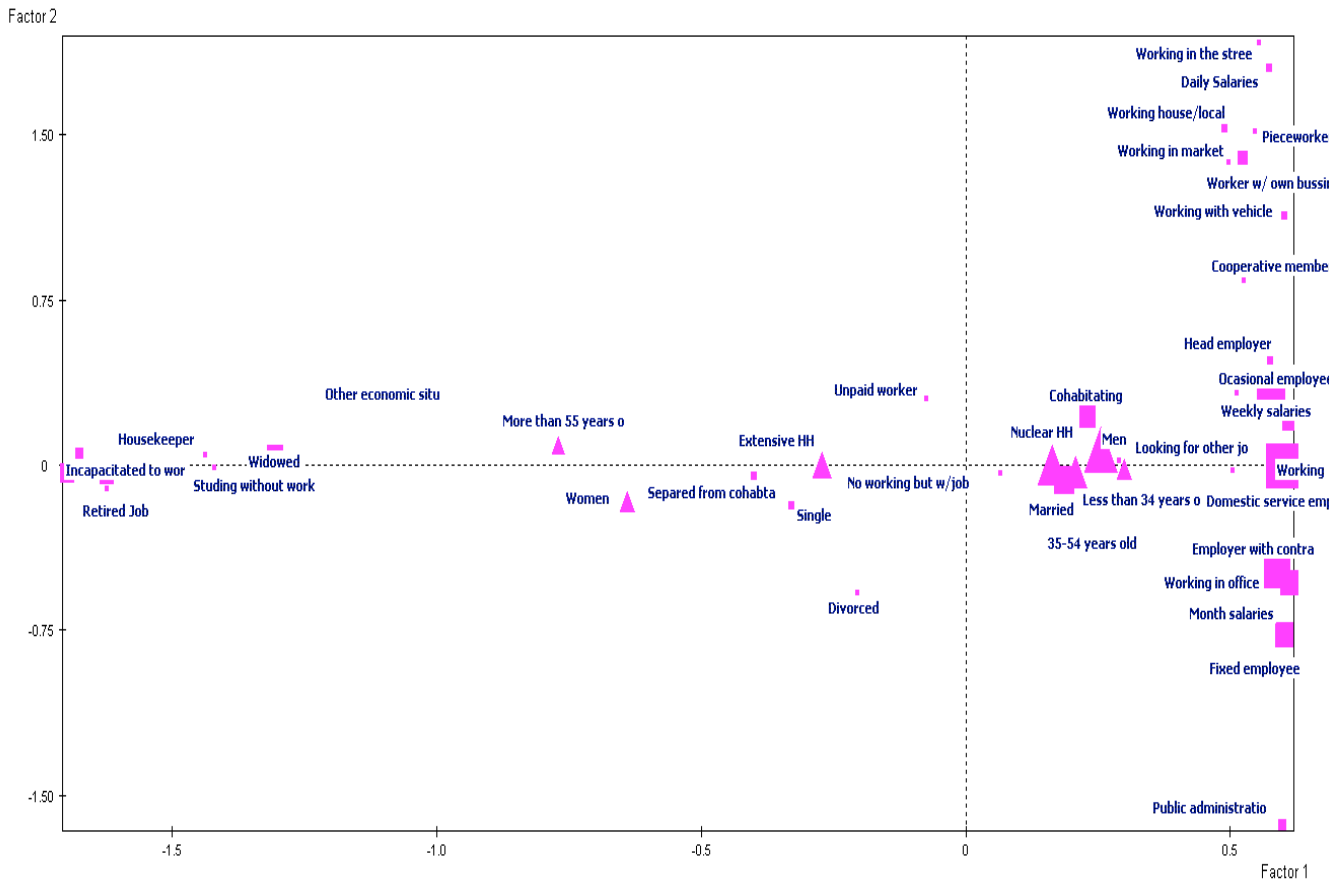
From educational point of view (Factorial Plane 1) reference persons in nuclear households are younger and more educated, (less than 54 years old). While, on the opposite side are the extended homes with old women less educated. Same situation happen to the plane refer to socioeconomic characteristic, nuclear households are located around working and economic categories while the extensive homes are more closely to no laboral context.

Taking into account the contributively categories from the explorative analysis we present the logistic regression to study the guidelines of extensive households.

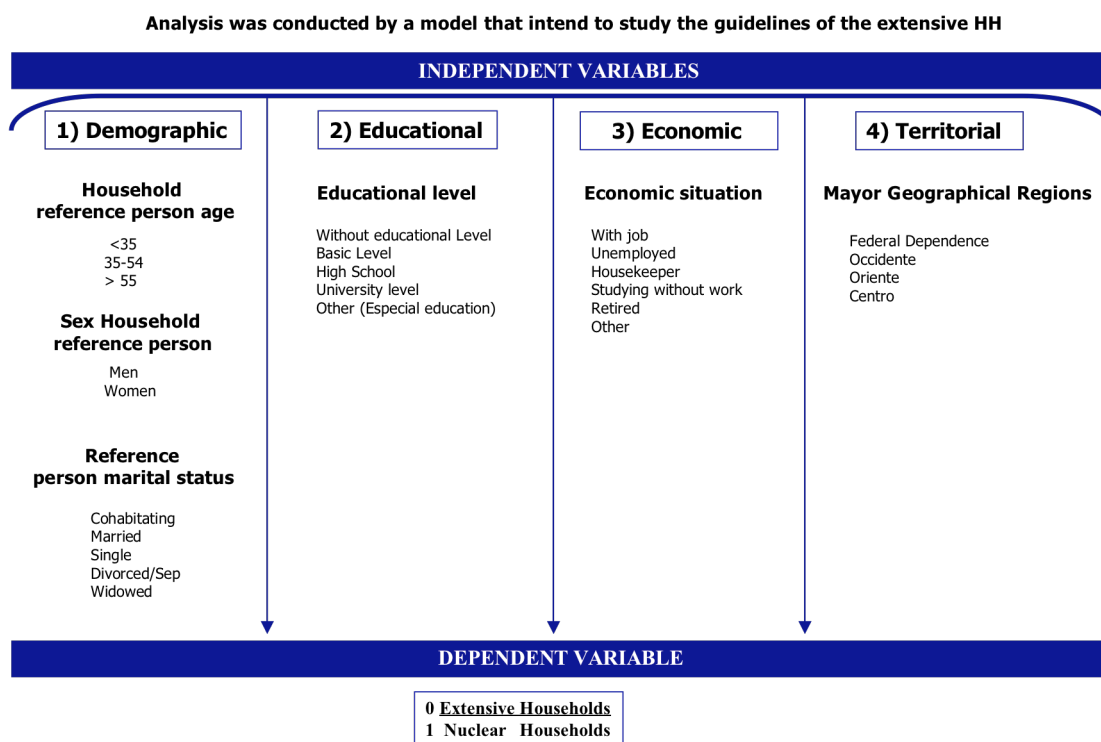Figure 1. Variables for the Logistic Regression model.

Analysis was conducted by a model that intend to study the guidelines of the extensive HH

INDEPENDENT VARIABLES

1) Demographic	2) Educational	3) Economic	4) Territorial
Household reference person age <35 35-54 > 55 **Sex Household reference person** Men Women **Reference person marital status** Cohabitating Married Single Divorced/Sep Widowed	**Educational level** Without educational Level Basic Level High School University level Other (Especial education)	**Economic situation** With job Unemployed Housekeeper Studying without work Retired Other	**Mayor Geographical Regions** Federal Dependence Occidente Oriente Centro

DEPENDENT VARIABLE

0 Extensive Households
1 Nuclear Households

Table 1. Logistic Regression model.

Logistic model to know the guidelines of Extensive HH
Households in Venezuela 2001

Variables in the Equation	Categories	Sig.	Exp(B)
Sex	**Women**		ref
	Men	0,000	0,821
Educational Level	**Without educational**		ref
	Basic School	0,000	0,874
	High School	0,000	0,732
	University Level	0,000	0,637
	Other (Especial education)	0,000	1,270
Marital status	**Cohabitating**		ref
	Married	0,000	1,037
	Single	0,000	3,650
	Divorced/Separed	0,000	1,835
	Widowed	0,000	2,252
Economic situation	**With job**		ref
	Unemployed	0,000	0,954
	Housekeeper	0,000	1,195
	Studying without work	0,000	2,225
	Retired	0,000	1,315
	Other economic situation	0,000	1,247
Reference person age	**More than 55 years old**		ref
	Less than 35 years old	0,000	0,344
	35-54 years old	0,000	0,473
Mayor Geographical regions	**Federal Dependence**		ref
	Occidente	0,000	1,048
	Oriente	0,000	1,056
	Centro	0,000	1,061
	Constant	0,000	1,417

Source: INE, Census of Population and Housing (2001)

As reflected in the multiple correspondence analyses, we can notice that reference persons concerned with a low educational level, singe or widowed, have more propensities to belong to extensive homes. As well as, reference persons younger are less likely to reside in large households. These results indicate that other models, which include all persons living in households, should be done in order to understating the decline of households in younger ages in 2001.

The last part addressed the household projections. The projections are a key component in the analysis of several socio-economic studies. Forecasting can anticipate changes in number, size and households composition. Families and households are regarded as coexistence basic unit. Therefore, future family arrangements have social, cultural, economic and environmental implications, as well as knowledge of future homes is relevant to the public planning decision. In this sense, we apply the predominantly macro-static model used in recent decades: the headship rate. By the time of this communication we preparing the households projections using a methodology developed by Dalkhat Ediev from Vienna Institute of Demography. The idea is to project households by age of the reference person and household size. The projection of households is base on Venezuelan population projections developed by the United Nations. For the sake of simplicity, the sources for the previous population study and households structure are from the Integrated Public Use Micro data Series (IPUMS). The households projection are based on the Venezuelan Census data 2001. Furthermore, we consider the demographic transition classification established by the Latin American Demographic Centre (CELADE) for internal geographic areas.

Table 2. Venezuela Households Projection 2010.

YEAR	AGE	POPULATION:			Total-Private HHs		With... persons									10+	
		Total Persons	Persons in Institutional HH	Persons Private HH	Head of HH	Persons	1	2	3	4	5	6	7	8	9	Households	Persons
	<15	8469973	29297	8440676	0	0	0	0	0	0	0	0	0	0	0	0	0
	15-19	2706531	41199	2665332	67649	191381	17231	18670	16021	7110	3426	1920	1730	315	257	969	14716
	20-24	2675674	54024	2621650	334215	1097360	45674	71810	100272	59594	27405	12500	9681	1556	1237	4487	65506
	25-29	2437505	29685	2407820	625446	2250224	58664	106989	172637	140995	74829	34254	25646	2688	1924	6820	97687
	30-34	2208729	18946	2189783	813402	3143605	63738	109562	188291	206533	124098	59735	48610	3197	2250	7388	104745
	35-39	1898823	13004	1885819	835010	3376186	63234	96766	164643	213598	145170	72838	66408	3127	2285	6941	97786
2010	40-44	1798505	11076	1787429	894462	3692940	70257	102972	163069	213107	157095	85282	89473	3395	2408	7403	102788
	45-49	1646356	9496	1636860	896041	3677961	78009	112932	163161	195712	146850	100247	86133	3302	2346	7348	101453
	50-54	1341830	7267	1334563	777972	3133912	79702	111079	142258	153024	115140	71592	93736	2914	1993	6532	90520
	55-59	1129946	6252	1123694	680173	2661236	83335	111193	123943	119202	89318	58671	84185	2578	1836	5913	81822
	60-64	883619	5275	878344	548130	2070219	80351	100367	98751	84802	64037	43966	67477	1988	1527	4864	67708
	65-69	627777	4061	623716	392330	1427966	64832	80517	68888	55644	41250	29319	45996	1447	1037	3400	47816
	70-74	436971	3577	433394	262775	913226	49423	59116	45294	34097	25181	17993	27944	889	668	2170	30711
	75-79	315366	3552	311814	174312	589164	35164	41221	29769	21631	15502	11231	17320	560	415	1498	21376
	80+	256240	4999	251241	113502	366754	25221	27795	19385	13776	9731	6528	9503	383	279	900	12768
	Total	28.833.845	241.710	28.592.135	7.415.418	28.592.135	814.837	1.150.991	1.496.384	1.518.826	1.039.032	591.962	687.954	28.337	20.461	66.635	937.403

Table 3. Venezuela Households Projection 2020

YEAR	AGE	POPULATION: Total Persons	Persons in Institutional HH	Persons Private HH	Total-Private HHs Head of HH	Persons	With... persons 1	2	3	4	5	6	7	8	9	10+ Households	10+ Persons
	<15	8661050	29702	8631348	0	0	0	0	0	0	0	0	0	0	0	0	0
	15-19	2807698	43296	2764402	70611	182601	21268	20493	15599	6266	2878	1563	1334	247	201	763	11598
	20-24	2712500	54496	2658004	339538	1011832	59600	84602	101306	51383	21419	9272	6779	1105	878	3194	46656
	25-29	2666638	32285	2634353	686511	2232984	86950	144615	200887	137375	63310	26558	18505	1961	1400	4952	70928
	30-34	2631442	22372	2609070	972171	3387196	105354	168027	253079	231392	117397	50215	36998	2439	1706	5565	78857
	35-39	2395616	16343	2379273	1055348	3840372	111030	159746	242357	263552	150116	65907	53024	2459	1784	5373	75653
2020	40-44	2166183	13284	2152899	1078412	4004149	117107	161158	229600	255129	159931	76286	69406	2546	1792	5456	75695
	45-49	1852651	10557	1842094	1009453	3727105	119851	161493	210351	217840	142026	74168	74568	2354	1659	5145	70984
	50-54	1737924	9274	1728650	1008758	3657736	137923	177120	205053	193671	129613	72976	82831	2466	1674	5431	75196
	55-59	1565323	8508	1556815	943381	3326011	150632	183285	185334	159054	108273	65386	81880	2413	1706	5440	75220
	60-64	1242874	7302	1235572	771560	2629434	143930	162716	145751	113325	79088	50472	68159	1947	1485	4686	65188
	65-69	1004990	6476	998514	627742	2064643	129921	144734	113159	83488	57823	38466	53527	1645	1172	3807	53516
	70-74	738874	6073	732801	443630	1395864	102720	109610	76938	53286	37036	24892	34632	1087	812	2616	37001
	75-79	480641	5419	475222	265094	812183	65227	68010	45036	30188	20454	13984	19458	626	461	1651	23541
	80+	401561	7915	393646	177370	520552	47459	46541	29786	19530	13027	8265	10971	442	321	1029	14586
	Total	33.065.965	273.302	32.792.663	9.449.579	32.792.663	1.398.970	1.792.149	2.054.233	1.815.477	1.102.391	578.391	612.071	23.738	17.052	55.108	774.622

Taking into account the previous households composition narrative concerning, we will elaborate the households projections by type of household.

Finally, we will conclude this research with residential demand, dwellings studies has close ties with demographic changes, the proportion of household reference person affects housing establishment. From another point of view, as stated by Cheeseman (1996), the individuals course of life transitions (marriage, divorce, widowhood) does not necessarily affect the total number of households, the household dissolution may turn to other instead creating new households types. However, the relation between demographic variables and housing it is not necessarily established unidirectional, whereby it is also plausible to think that housing accessibility may have implications on demographic changes, especially in the formation of non-family households. The aim of this part (to develop in future) it is a demographic analysis of housing needs, deciphering possible scenarios for future residential demand and housing units estimates for Venezuela states.

IV. FIRST CONCLUSIONS

From a demographic aspect:

.-Age and sex are relevant in the extensive households conformation. However, we still to answer if this situation refers to an age effect or a cohort effect?

From a socioeconomic point of view:

.-Reference persons with low economics situation and less educational background are more likely to live in extensive households.

From a Geographical context:

.-Living in certain Venezuela sub-regions affect the formation of extensive households.

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Annex

Population by sex and age, Venezuela Census 1873-2001

Census	Total	Men	%	Women	%
1873	1.437.757	686.076	47,72	751.681	52,28
1881	2.075.245	1.005.518	48,45	1.069.727	51,55
1891	2.290.228	1.119.843	48,90	1.170.385	51,10
1920	2.363.138	1.134.262	48,00	1.228.876	52,00
1926	2.890.731	1.414.596	48,94	1.476.135	51,06
1936	3.364.347	1.652.130	49,11	1.712.217	50,89
1941	3.850.771	1.908.545	49,56	1.942.226	50,44
1950	5.034.838	2.552.491	50,70	2.482.347	49,30
1961	7.523.999	3.821.722	50,79	3.702.277	49,21
1971	10.721.522	5.357.157	49,97	5.364.365	50,03
1981	14.516.735	7.259.812	50,01	7.256.923	49,99
1990	18.105.265	9.019.757	49,82	9.085.508	50,18
2001	23.232.553	11.495.270	49,48	11.737.283	50,52

Source: Statistical National Institute (INE)

Venezuelan demographic data from 1950 to 2000

Period	Mortality rate	Global fertility rate	Life Expentancy
1950-1954	12,4	6,3	55,2
1955-1959	10,7	6,7	58,1
1960-1964	9,3	6,5	62,2
1965-1969	7,7	5,9	64,8
1970-1974	6,6	5,0	66,7
1975-1979	5,9	4,5	67,7
1980-1984	5,5	4,1	68,8
1985-1989	5,0	3,6	70,5
1990-1994	4,8	3,2	71,8
1995-2000	4,7	3,0	72,8

Source: Statistical National Institute (INE)

Venezuela Households and Households by Basic Unsatisfied Needs (NBI) 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
Total Households	4.996.523	5.217.043	5.758.490	5.851.911	6.004.141	6.135.569	6.319.445	6.423.801
No poverty households (NBS)	3.482.301	3.735.833	3.918.899	4.027.671	4.219.001	4.494.069	4.842.249	4.926.716
(%)	*69,9*	*72,2*	*68,8*	*69,5*	*70,4*	*73,3*	*76,6*	*76,7*
Poverty households (NBI)	1.498.050	1.440.959	1.777.629	1.767.148	1.777.126	1.638.442	1.477.060	1.493.850
(%)	*30,1*	*27,8*	*31,2*	*30,5*	*29,6*	*26,7*	*23,4*	*23,3*
No extreme poverty	976.299	958.009	1.035.697	1.033.867	1.048.305	1.020.737	905.351	951.891
(%)	*19,6*	*18,5*	*18,2*	*17,8*	*17,5*	*16,6*	*14,3*	*14,8*
Extreme poverty	521.751	482.950	741.932	733.281	728.821	617.705	571.709	541.959
(%)	*10,5*	*9,3*	*13,0*	*12,7*	*12,2*	*10,1*	*9,0*	*8,4*

Source: Statistical National Institute (INE)