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APPROXIMATION TO THE WELL-BEING OF THE VENEZUELAN ACROSS AN ANALYSIS OF INFORMATION OF THE FAMILY BUDGET SURVEY.

ABSTRACT

The Family Budget Survey [EPF by its initials in Spanish] represents a respectable and useful source of information when trying to measure welfare; the diffusion of this type of survey, the size of the sample in which it applies, the consistency, frequency and quality of its data - whose validity is vouched by the national institutions that devise it - are arguments in favour of using this information to explore agile ways of obtaining no longer a quantification, but an approximation of the wellbeing of a particular population; hence the objective of the study that is presented be to describe the process and theoretical reasoning that leads to propose an index of wellbeing that can be calculated from data processing of the different variables provided by the EPF, resulting in an abbreviated measurement of wellbeing and / or changes in wellbeing. In doing so, it raised the choice of a representative group of key assets, whose consumption is considered closely associated with partial aspects of wellbeing understood in the broad sense used by Amartya Sen. Similarly, achieving the goal, requires preliminary estimates of changes in the welfare of the Venezuelan family, using variables theoretically supported in the shape of measurement of welfare presented by agencies as the World Bank, but under the probabilistic approach, which considers changes welfare as measured through the Odds Ratio, obtained through a Logit model.

Keywords: index of wellbeing, Venezuelan Family Budget Survey, Odds Ratio.

INTRODUCTION

When it comes to discussing Wellbeing in the particular Venezuelan context by using a relatively standard and globally spread instrument, such as the Household Budget Survey [HBS], it's highly convenient to clarify the theoretical suppositions that will lead to the handling and analysis of the data obtained from that source. In order to accomplish this, here we present a reflection on how utility can quantify welfare, considering as a starting point the concepts normally associated to it, i.e. necessities, goods and consumption.

Although it's certainly fair to acknowledge the fact that this attempt to adhere to the concept of welfare is, by itself, a limitation of the wide definition of Well-being that we'd like to see captured in the data supplied by the HBS, it is also true that the vast range of samples on which this type of survey is conducted, along with its consistency, periodicity and the quality of the data, supported in our case by the Central Bank of Venezuela [BCV], provide arguments in favor of the utilization of this information in an attempt to explore express ways to obtain, not a quantifier, but an indicator of the Wellbeing in a particular community, which may well serve as a guide when eventual evaluations of variations are done in the future.

The question driving our efforts is, ultimately, how can we make it possible to generate an approximated measurement of Wellbeing through HBS data in the Venezuelan particular case? When searching for an answer, the following study's goal is to propose a Wellbeing index that can be calculated through the elaboration of a portion of the data provided by the HBS; to achieve this objective we propose:

1. Establishing a theoretical reasoning that would sustain the construction of an Abbreviated Welfare Index, obtainable through the processing of the data on different variables provided by the HBS.
2. Building up an Abbreviated Wellbeing Index, through the processing of the data on different variables previously provided by the HBS.

3. Measuring the changes in the estimated welfare contained in the 3rd HBS carried out in Venezuela by Ratio Odds, obtained through a Logit model. This, in order to establish a subsequent comparison parameter to test the consistency and sturdiness of the proposed index.

WELFARE REGARDED AS THE FULFILLMENT OF NECESSITIES.

Utility is the concept that's generally used when referring to the benefit that is perceived to receive by the use of goods or services. This theoretical delimitation has turned out to be quite polemical through all the development of the Economical Theory. Particularly, when normative deductions of the distributive kind are intended, and which are typical in the welfare economics theory.

When the main objective is to maximize the utility of a particular group of people, the discussion revolves around the distributive implications of the extremely cardinal and ordinal views of utility; because of this, we have adopted the Amartya Sen view. He suggests "sorting out and evaluating social states from the construction of Wellbeing indicators, which necessarily require interpersonal comparisons to study distributive consequences (poverty, inequality, etc.) in determined types of societies" (in Casas et al., p.10).

This would be an appropriate moment to stand out the fact that redistribution of personal utility to maximize collective utility deals, necessarily relates to the redistribution of access to goods which utilization generates utility. This fact centers the attention on: what and how it originates this utility. Utility has been explained through an approximation to other concepts, such as achieving happiness, freedom of choice and the possibility to choose how to use the goods, and even satisfaction of the desire (Gamboa and Cortez, 1999). However, given the difficulties that arise when trying to measure such meanings, the distinct notions of utility will be grouped, since we consider them to converge into the neoclassic notion which defines utility as the fulfillment of necessities.

What we consider a necessity is no longer necessarily equal to what is strictly indispensable or necessary for subsistence. This perception has been replaced for one

that includes those things we desire beyond what's indispensable (Casas et al., 2001). Furthermore, since this notion of utility is directly associated to the notion of Wellbeing, a confining sense of this as what is essential to live would take us to a limited conception of welfare that we consider to be insufficient, if we observe the nature of the study; therefore, Guerrero's view is embraced, since he considers that human needs depend on people's will and are directly related to "the standards or levels of life quality they have set for themselves" (2007, p.3).

Following the lead of this reflection from Guerrero (2007), who claims that "the neoclassic economic theory relates human necessities with the lacks that is experienced by families on their way to reach the standard or level of life quality they desire for themselves" (p.5), we may well consider that an increase of welfare will translate into a bigger fulfillment of such necessities. Moreover, recalling the basic notion in the theory that considers goods as the means used by people to satisfy their needs, we could affirm that if such goods increase, the wellbeing of individuals should improve in correspondence. Having said this, and not concerned about how utility conveys this increase of welfare, it is possible to set a back up for the construction of welfare indicators and to justify the inclusion of the use or consumption of determined goods as variables to constitute these indicators already mentioned.

If it is true, as Max-Neef, Elizalde and Hopenhayn say (1986), that human needs can be summarized into a few categories (subsistence, affection, protection, understanding, leisure, participation, creation, identity and freedom), then we could determine groups of "key goods" which will put the spotlight on what kind of necessities or what degree of satisfaction is obtained by using the considered goods, to get an approximated value of the wellbeing acquired by those who consume them. In order to accomplish this, it is important to remember that needs can not be mistaken for goods, as Guerrero (2007) suggests that "necessities do not change according to the person and develop throughout history, but the multiple means to fulfil those needs do" (p.5).

The definition of a good indicator of well-being would center the attention in the goods that could reflect better, in a determined environment, the satisfaction of the

needs that guarantee the well-being of who unfold in that same environment and that here will be called key goods.

Among these key goods, public as well as private property could also be included, with no detriment of those means which, according to Guerrero (2007), “are able to satisfy collective needs and cannot be used without other’s consent” (p.5), including in this category the organized society’s deeds as well as the State’s, which are mentioned by the author.

The definition of wellbeing has been evolving from a meaning based on the consumption of goods toward concepts related to realizations and capabilities proposed by Sen, according to whom not only the possibility of using the goods is valuable, but also the fact that we can choose what to do with them; in this case, the benefit comes from the freedom people have to choose a way of living that they enjoy and cherish (Sen 1990, p.113 in Gamboa and Cortes, 1999). Even when Sen’s vision as interpreted by Guerrero (2007), may seem to be calling for an imperative change from consumption to realization to evaluate wellbeing accurately -not only through the use of goods but through individual and collective mechanisms and actions- still such mechanisms and actions could be associated to the use of goods. Furthermore, the consumption of these goods can be registered with instruments for information gathering, such as HBS and this consumption can be categorized as key goods, representing those aspects of wellbeing which might result harder to register.

Recognizing that people’s wellbeing depends on the group of satisfactorily achieved realizations (according to their group of capabilities), it is also worth noting that any eventual wellbeing index would only signify an approximation. This handicap is unavoidable, since realizations are a much broader concept than that of goods consumption. This is because realizations express what the individual is capable of doing with the goods, no matter if he does it or not. (Gamboa & Cortes, 1999). Considering this, the concept of functions proposed by Salcedo which considers them as “the things people can obtain with their possessions and through them” (Casas et al. p.12) would then be closer to the real idea of wellbeing.

A deep analysis on the different aspects that lead to wellbeing allows us to understand that, since each person's capacities are different, each person's choices will meet different functions, in spite of having the same amount of the considered good.

This approach to realizations entails a much more widely defined and well-known concept of welfare called well-being (or Wellbeing). Under this new wider view, Wellbeing takes into consideration some aspects which go along some interpersonal comparisons and at the same time has elements that are not possible to quantify but only approximate; for example, an increase of individual liberties will lead to an increase of Wellbeing, but this dimension of well-being can only be approximated by observing attributes such as equality of rights, institutional controls over personal decisions, etc..

CRITERIA FOR DEFINING A WELFARE INDEX.

In our particular case, the source of information takes us necessarily to a measurement of wellbeing that refers to goods consumption; nonetheless, we wouldn't want to focus on an extremely scientific economic definition of life quality levels, but to deduce other components of wellbeing which may concentrate on the needs that are pursued together with some realizations and capabilities. All of the mentioned items are aspects that do not need to be pinpointed using the measurements applied so as to insert them in an eventual index, but to be inferred from such measurements.

When we come to decide which useful variables to calculate a wellbeing index are best estimated in the HBS, Ruiz (2003) concludes that, in the case households soften their consumption flow through time, the current expense variable is the one that offers the closest conceptual approximation. Even better than permanent household consumption which is in turn considered one of the best ways to approximate household welfare.

To be able to talk about wellbeing, we must establish a minimum degree of satisfaction of necessities. Below this degree, we will consider a state of shortage that would make it impossible to achieve wellbeing. The index should represent relative values which would show the quantitative relationship between the state of minimum satisfaction of needs and the real situation registered in the HBS.

In the attempt to introduce the capabilities which favor realizations and are also potential generators of wellbeing, it is convenient to include variables associated to education and information, since both of them, in essence, increase our capabilities.

Aware as we are that proper nutrition levels, a lower tendency to become ill, having a healthy self-esteem, living in good environmental conditions and a greater participation in the life of the community could certainly have an important impact on the increase of Wellbeing (Casas et al. 2001), it proves convenient to establish some key goods registered in the HBS, which consumption could be associated to Wellbeing aspects previously mentioned.

INDEX OF LIVING CONDITIONS.

Currently, there is an index that tries to measure the welfare generated by the social programs carried out by the Venezuelan Government, based on a similar methodology to the one used by the UNDP for estimating Human Development Index [HDI]. This effort to measure welfare is called Index of Living Conditions [ICV] and was performed by the Central Bank of Venezuela. In the index, three dimensions that take part in the assessment of HDI are considered: Healthiness, Education and Income; and indicators of these are also identified; some of which are disposal of body waste products, overcrowding, type of housing, education, literacy, level of instruction and income. These indicators are used to calculate partial indexes for each dimension that are subsequently averaged in order to obtain the Index of Living Conditions, which ranges from 0 to 100.

Taking ICV definition and calculation as a starting point, the BCV establishes living level classes according to the scale shown in Chart 1 below.

Living Condition class	Scale
High Condition	80 a 100
High medium condition	70 a 79
Average medium condition	60 a 69
Low medium condition	50 a 59

low condition	0 a 49
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Chart 1 Living condition categories. (Source: BCV).

The following equation defines this index: [1]

$$\text{ICV of the welfare dimension in the household } nth. = \frac{(\text{Value in household } nth - \text{Minimum reference value})}{(\text{Maximum reference value} - \text{Minimum reference value})}$$

$$\text{ICV} = \frac{(\text{Healthiness index} + \text{Education index} + \text{Income index})}{3} \quad [2]$$

According to a press release by the BCV on July 23rd, 2007:

Venezuela went from a moderate medium welfare in 1997, to a high level welfare in 2005. It's worth noting that in 1997 the only domain that showed a high level of wellbeing was the metropolitan area of Caracas; whereas in 2005, three domains in the study present this level of welfare: the metropolitan area of Caracas, the big cities and the medium size cities.

METHODOLOGY

The study was based on data supplied by the 3rd HBS provided by the BCV, corresponding to the year 2005. This survey consists of 9 questionnaires which register information about the characteristics of basic units of sampling, housing characteristics, general household characteristics, daily household expenses, daily personal expenses, monthly expenses, three-monthly and annual expenses, income and production coming from independent work, micro-businesses or farms. It was conducted over a sample of 8281

The defined analysis unit for this study is the household, which is described as follows:

The household consists of a group of people who depend on a common fund for their expenses or at least for food expenses and who has resided in the same house most of the last 6-month span, or else have expressed their intention to establish it as their residence. (Meza, 2000).

Therefore, all data used to calculate indexes and models presented here refer to households as defined above.

VARIABLE MANAGEMENT.

Understanding that an increase of wellbeing means an increase of functions which, in any case, lead to a higher level of satisfaction of necessities; and also taking into consideration that the ways these necessities are manifested depend on how people desire to develop their lives and that those people's capacities are the vehicle they use to satisfy those needs, an analysis of the information supplied by the 3rd HBS in Venezuela was carried out. This, in order to identify data from which we could infer the consumption of goods associated to (i) the accomplishment of necessity categories set by Max-Neef et al. (1986); (ii) the improvement of capabilities that would lead to an increase of realizations and (iii) the expansion of functions.

Here we present a Chart 2 which summarizes the variables and indicators that were used to reflect well-being dimensions included in the abbreviated wellbeing index.

Nonetheless, it's required to notice that – following the axiology in Max-Neef's proposal et al. (1986)- the most inherent aspects to wellbeing dimension related to the need of affection was removed from the analysis, since it was not possible to find an adequate indicator for such things as company, attention, etc. which were presented as indicators of affection. Also, the needs to create, and those of identity and freedom were not included because we consider that none of the data supplied by the 3er HBS represented a suitable indicator for the variables established for these aspects.

Dimension of the wellbeing	Variables	Indicator	Data
Satisfaction need of subsistence	Nourishment	Food consumption	Coefficient of coverage of the basic basket of food
		Frequency of nourishment	Coefficient of frequency of nourishment
	Housing Sets	Disposition of housing	Conditions of occupation of the housing
		Accumulation (-)	-mts2*prs that occupies the house
		Access to basic services	Drinkable Water, disposition of served waters
	Healthy environment	waste disposal	NI
		Access to service of disposal of body waste products	Housing that arranges of the service of disposal of body waste products
	Healthy Attention	Access to services of integral health	Types of system of social forecast
Satisfaction of need of affection	Company	Persons who live accompanied	N ° homes of more than one person
Satisfaction of safety need	Physical Security	Through Consumption of goods or services for the physical security (-)	Monthly expense in alarms, services of alertness and others
	Economic Security	Employment	Rate of family protection
	Autonomy	Suffering disability (-)	Rate of autonomy for home

Satisfaction of need of understanding and / or Increase of the capabilities	Education	Illiteracy (-)	Rate of illiteracy of the home
		Level of studies	Level of studies reached (+) per person
	Training	Extracurricular formation	Rate of associated expenses to inscription in extracurricular education (courses)
	Information	Access to media of information	Rate of Internet access
Satisfaction of need of leisure	Time for the leisure	Availability of free time	Coefficient of free time
	Recreation	I consume of associated goods to recreational activities	Rate of associates to sports and recreational activities
Satisfaction of needs of participation	Citizenship and / or Social Responsibility	Activities of Volunteerism	Rate of contribution to associations without end of gain
		Associative activities	Rate contribution to affiliation to associations, union and political
Satisfaction of need of creation	cultural Activities	I consume of goods and cultural services	(They included in associated Expense to sports and recreational activities)
Satisfaction of need of identity	Register of identity	Documentation of identity	Identity Documentation disposition
Satisfaction of needs of freedom	NI	NI	NI

NI: Not Included in the proposed index.

Chart 2 Diagram for Management of variables associated to wellbeing.

ABBREVIATED WELLBEING INDEX.

Once we have established the wellbeing dimensions capable of being approximated with data from the HBS, a wellbeing index was to be designed. This would include indicator of satisfactions of the needs of subsistence, protection, understanding, leisure and participation, as well as indicators for a potential increase of capabilities which may suppose an increment of realizations and a probable increase of functions, which would translate into an increase of wellbeing. This index we present next has been named Abbreviated Wellbeing Index. [IAB by its initials in Spanish].

$$IAB = \frac{S_{a_1} + S_{a_2} + S_{v_1} + S_{as_2} + S_{s_1} + P_{f_1} + P_{e_1} + P_{a_1} + EC_{e_1} + EC_{e_2} + EC_{c_1} + EC_{i_1} + O_{o_1} + O_{o_2} + PA_{cr_1} + PA_{cr_2}}{NIP *}$$
 [3]

(*) NIP = Number of partial indices

Data	Legend	Equation
Coefficient of cover of the basic basket of food (S_{a_1})	GA : Total expense by food CA : Value of eating basket	$S_{a_1} = \frac{(GA - CA)}{GA}$ [4]
Nourishment frequency coefficient (S_{a_2})	TC : Daily frequency of nourishment 1 : minimum daily nourishment	$S_{a_2} = \frac{(TC - 1)}{TC}$ [5]
Conditions of occupation of the dwelling (S_{v_1})	CO : occupation code Own =3, It rented =2, Occupied =1, does not have access to housing = -3	$S_{v_1} = \frac{CO}{3}$ [6]
Dwelling that has disposal of body waste products service (S_{as_2})	CS : service code Has the service = 1 In other cases = -1	$S_{as_2} = CS$ [7]
Social forecast system types (S_{s_1})	CPS : social security type code It is protected = 1 It is not protected = -1	$S_{s_1} = CPS$ [8]
Monthly expense in alarms, services of security and other (P_{f_1})	GST : Total expenses by safety of nth household $GS \min$ minimal expenses by safety registered $GS \max$: maximum expenses by safety registered	$P_{f_1} = -\frac{(GST - GS \min)}{GS \max - GS \min}$ [9]

Rate of family protection (P_{e_1})	ME : N° member of the home employed MT : N° member of the home	$P_{e_1} = \frac{ME}{MT}$	[10]
Rate of autonomy by home (P_{a_1})	MD : N ° of disabled persons for home $MPEA$: N ° of economically active members of the home	$P_{a_1} = -\frac{MD}{MPEA}$	[11]
Rate of illiteracy of the home (EC_{e_1})	MAN : N ° illiterate of the home MT : N° member of the home	$EC_{e_1} = -\frac{MAN}{MT}$	[12]
Level of studies reached per person (EC_{e_2})	PNE : Average of the study level codes of the members of the home 6 : maximum study level codes without level =-3 Pre-school = 0 Missions = 1 Basic =2 Diversified =3 University Technician degree = 4 University degree = 5 Postdegree = 6	$EC_{e_2} = \frac{PNE}{6}$	[13]
Rate of associated expenses to inscription in extracurricular education (EC_{c_1})	GCT : inscription registration expenses to courses and other extra-curriculum activities of the of nth household $GC \min$ minimal inscription registration expenses to courses and other extra-curriculum activities registered $GC \max$: maximum inscription registration expenses to courses and other extra-curriculum activities registered	$EC_{c_1} = \frac{(GCT - GC \min)}{GC \max - GC \min}$	[14]
Rate of Internet access (EC_{i_1})	GIT : Expenses subscription to Internet service and ' Internet service per hour of the of nth household $G \text{Im} \text{in}$ minimal Expenses subscription to Internet service and ' Internet service per hour registered $G \text{Im} \text{ax}$: maximum Expenses subscription to Internet service and Internet service per hour registered	$EC_{i_1} = \frac{(GIT - G \text{Im} \text{in})}{G \text{Im} \text{ax} - G \text{Im} \text{in}}$	[15]
Coefficient of free time (O_{o_1})	$MaxHT$: maximum Normative weekly of working hours* HT average weekly of working hours of the of nth household†	$O_{o_1} = \frac{MaxHT - HT}{MaxHT}$	[16]
Rate of recreative and sports expenses (O_{o_2})	GR : Expenses related with recreative and sports activities of the of nth household $GR \min$: minimal Expenses related with recreative and sports activities registered $GR \max$: maximum Expenses related with recreative and sports activities registered	$O_{o_2} = \frac{GR - GR \min}{GR \max - GR \min}$	[17]

* Venezuelan legislation establishes a top of 44 hours a week a person, so $MaxHT = 44 * ME$:

† $HT = \sum$ hours a week worked by an employee / $MPEA$:

<p>Rate of No Profit donation expenses (PA_{cr_1})</p>	<p>GD : Expenses Donations to No Profit institutions of the of nth household $GD \min$: minimal expenses Donations to No Profit institutions registered $GD \max$: maximum expenses Donations to No Profit institutions registered</p>	$PA_{cr_1} = \frac{GD - GD \min}{GD \max - GD \min} \quad [18]$
<p>Rate of expenses in affiliation to political associations and syndical unions (PA_{cr_2})</p>	<p>GAA : Expenses affiliation to political associations and syndical unions of nth household $GAA \min$: minimal expenses affiliation to political associations and syndical unions registered $GAA \max$: maximum expenses affiliation to political associations and syndical unions registered</p>	$PA_{cr_2} = \frac{GAA - GAA \min}{GAA \max - GAA \min} \quad [19]$

Chart 3 Data Legend and Equation of IAB index

Under the premise that welfare can be measured through consumption, in this paper two alternatives were considered for measuring welfare by using pre-existing models; the first one, through a lineal regressive model, as a preliminary estimation to detect the variables (supplied by the HBS) that explain consumption, and therefore, welfare. The second one, through Ratios Odds quotient, obtained through Logit models.

From the 3rd HBS we can obtain the monthly expenses within a family consumption of varied goods and services associated to food, clothing, personal hygiene, formal education, health, leisure activities, home-related services, banking services, communication services, traveling and transportation services. Other variables (also obtained from the HBS) can be associated with such expenses, for example family income, average educational level in the family, etc.

LINEAL MODEL.

On this first step, consumption was taken as a variable which depends on the income and later, as a variable which depends on the educational level. Finally, it was treated as the conjunction of both models. This means:

$$\text{First lineal model} \quad C_i = \beta_1 + \beta_2 I_i + \varepsilon_i \quad [20]$$

C_i is the consumption in the n th household, measured in Bolivars per month (Bs. /month), I_i is the total income, (monetary, in kind, plus transferences) of the n th household, measured in Bolivars per month (Bs. /month) and ε_i is the term for "error".

The obtained results were the following:

$$C_i = 163 + 0,02I_i + \varepsilon_i \quad [21]$$

Which means that, before an increase of 1 Bs.F a month in the income, the average consumption goes up in 0.02 Bs.F on average as well. Also, for other reasons unrelated to income, consumption goes up on an average of 163.17 Bs.F. Thirty four percent of this variability of consumption is explained through the income. It's worth highlighting the fact that such model meets the demands of individual and global

validation tests, i.e. this model serves to predict and make concrete decisions in relation to the families' incomes.

For the second lineal model:

$$C_i = \beta_1 + \beta_2 E_i + \varepsilon_i \quad [22]$$

C_i is the consumption in the n th household, measured in Bolivars per month (Bs./month), E_i is the average educational level of the n th household (according to the scale presented in Chart 3) and ε_i is the term for "error".

Study Level	codes
Without level	0
Missions	1
Pre-school	2
Basic	3
Diversified	4
University Technician degree	5
University degree	6
Postdegree	7

Chart 4 Code scale by educational level.

The regression of the data observed in the 3rd HBS shows the following result:

$$C_i = -225,5 + 173,06 E_i + \varepsilon_i \quad [23]$$

The results suggest that, in the case of relocation to an immediately superior educational level (previously defined), a 173Bs.F increase will also be seen on the consumption. However, the educational level explains the consumption variability in Venezuelan households in 2005 only up to an 8%.

The third model is a hybrid resulting from the combination of the preceding two models. It became a multiple-regression model, involving income as well as educational level. This, in order to find a model which percentage of explanation of consumption variability among households in Venezuela had a higher range and magnitude. It is defined as follows:

$$C_i = \beta_1 + \beta_2 I_i + \beta_3 E_i + \varepsilon_i \quad [24]$$

Where C_i is the consumption in the n th household, measured in Bolivars per month (Bs. /month), I_i is the total income (monetary, in kind, plus transferences) of the n th household, measured in Bolivars per month (Bs. /month), E_i is the average educational level of the n th household (according to the scale presented in chart 4, and ε_i is the term for “error”.

The obtained result was:

$$C_i = -191,14 + 0,02I_i + 94,27E_i + \varepsilon_i \quad [25]$$

Which means that this third model explains consumption in a 34.4% (R^2); adding the educational level to a one-variable model (income) does not contribute enough as to increase the magnitude of R^2 .

To explain the predictive or explanatory power of all the methods that have been presented, it was decided to complement the first model to a further extent with other variables from the HBS such as, number of household members who are of economically active age and the product of independent work, as well as micro-business or agricultural farms. After doing this, there weren't any significant changes on the R^2 . Consequently, we consider valid to conclude that the income explains a great deal of the variability of consumption (34%) among Venezuelan families; however, no other variables which would increase this percentage in a relevant rate were found. Therefore, a significant portion of the variation in consumption of goods and services among Venezuelans must be explained by HBS variables that up to this moment haven't been included in the previous models. These preliminary estimations confirm the need to explore other measurement methods for welfare through consumption.

WELFARE VARIATION ACCORDING TO THE ODDS RATIOS QUOTIENT.

To investigate about the possibility of welfare change in Venezuelan households, we established $Y = 1$ as the dependent variable for those cases when the level of consumption in the n th household is greater than of equal to the basic basket at the

moment of data collection (2005). $Y = 0$ is used for all other cases. The income and the average educational level in the family were used as regressors. Three regressions were carried out; one for each regressive variable and another one to include both variables simultaneously in the model. The three models turned out as follows:

First Odds model. Independent variable: Income.

$$P_i = E(Y = 1 | I_i) = \frac{1}{1 + e^{-(-0,33 + 0,000114I_i)}} \quad [26]$$

Where P_i is the probability of the n th household's income being greater than the basic basket, given its income level (I_i). As a result, the odds ratios produce the following outcome:

$$\frac{\frac{P_i}{1 - P_i} \Big|_{(I_i+1)}}{\frac{P_i}{1 - P_i} \Big|_{I_i}} = e^{0,000114} = 1,000114 \quad [27]$$

According to the empirical evidence, the utility (that it is understood here as welfare) in a Venezuelan household when the monthly income goes up is greater than the utility of this household at the initial income level. In other words, in the case of a unitary increase of income, the probabilities of the consumption amount in the household being greater than what is spent on the basic basket rise 0,0114 %.

Second odds model: Independent variable: Educational level.

$$P_i = E(Y = 1 | E_i) = \frac{1}{1 + e^{-(-0,56 + 0,36E_i)}} \quad [28]$$

Where P_i is the probability of the n th household's income being greater than the basic basket, given its average educational level (E_i). Consequently, the odds ratio gives the following result:

$$\frac{\frac{P_i}{1-P_i} \Big|_{(E_i+1)}}{\frac{P_i}{1-P_i} \Big|_{E_i}} = e^{0,36} = 1,4327 \quad [29]$$

This in turn means that the utility in a Venezuelan household when its members' educational level increases is greater than the same household's utility when compared to the initial educational level. In other words, an increase in the average educational level in the household, increments the probabilities of a household consumption value being higher than what is spent on the basic basket in a 43.27%.

The results presented above should really be of relevance to those in charge of public policies in Venezuela, because according to the empirical evidence from the 3rd HBS, increasing the educational level in families generates a bigger chance of utility improvement than an increase in the income.

Third odds Model: Independent variables: Income and Educational Level.

$$P_i = E(Y = 1 | I_i E_i) = \frac{1}{1 + e^{-(-1,01 + 0,00011I_i + 0,167E_i)}} \quad [30]$$

Where P_i is the probability of the n th household's income being greater than the basic basket, given its average educational level (E_i) and its income level (I_i). The result of the odds ratio is:

$$\frac{\frac{P_i}{1-P_i} \Big|_{(I_i+1; E_i+1)}}{\frac{P_i}{1-P_i} \Big|_{I_i E_i}} = e^{0,00011+0,167} = 1,1818$$

Then, the empirical evidence allows us to determine that the utility in a Venezuelan household when the income and its average educational level go up is greater than this household's utility at initial levels of income and education. In other words, a unitary increment in the income and the average educational level in the household increases the probabilities of the consumption in the household to be 18.18% greater than what is spent in the basic basket. This means, of course, a higher utility.

CONCLUSIONS AND OBSERVATIONS.

The objective pursued by this study was to propose a wellbeing index that could be calculated by using different variables obtained through the HBS for the Venezuelan particular case. During the preliminary analysis, it became obvious the need to present an alternative index to that given by the BCV, which uses data from the HBS (ICV). These data only includes three of human development dimensions (healthiness, education and income), while omitting indicators of capabilities that are considered to be fundamental to the concept of Wellbeing, such as participation, leisure and protection. In addition to this, it is considered that including the income in the ICV makes it of little convenience if we intend to measure well-being, since there exists empirical proof that the income does not represent a fundamental determiner of consumption, associated to well-being.

The theoretical analysis of different authors' views on Wellbeing drove us to adopting a Wellbeing perspective of our own. This perspective is based on the necessities and in this way crosses the hurdles commonly associated to the use of the concept of utility when measuring welfare, as well as including some elements contained in Amartya Sen's broad view of the proposed functions though excluding income, since it is considered not to contribute to this new perspective in a significant way and could

actually produce conceptual disagreements within the Abbreviated Wellbeing Index that we propose.

The data provided by the Venezuelan HBS proved useful to the construction of indicators which permitted the inclusion on 12 out of 16 identified variables. Overcrowding, access to basic services, refuse collection service, people who live with others and documents of personal identification were not included in the index for being associated to the interpretation of the obtained results; this was produced by the format of the data in the surveys. For example, the indicator for consumption of cultural goods and services is not directly registered; however, it can be found partially included in some categories of recreational goods. Whereas, the need for freedom couldn't be associated to any of the data supplied by the 3rd HBS.

The preliminary estimations produced the following results:

1. Through a lineal regressive model:
 - a. The income explains the changeability of the consumption of the Venezuelan homes in an important percentage (34%) more not the sufficient thing. Nevertheless, the consumption is not increased in great magnitude before unit increases in the income level. It is translated in which the income is not of great utility to explain the well-being, measured through the consumption.
 - b. Among the Venezuelan families, the consumption enlarges significantly given a greater level educational average in the home, nevertheless, this lineal model is poor to level predictive and/or explanatory.
 - c. Upon adding different variables to the income to the lineal models, to try to increase the explanation prediction power of the levels of consumption, itself not such objective is achieved. What suggests an opportunity to investigate of deeper way about how variable available in the EPF, they explain sufficiently in a joint way, the changeability of the consumption of the homes in Venezuela.
2. Through odds ratios:

- a According to the empirical evidence from the 3rd HBS, increasing the educational level in families generates a bigger chance of utility improvement

Odds ratio represents a good measurement method for welfare variations in Venezuelan households. Its estimations are potentially useful in the event of future estimations of the Abbreviated Wellbeing Index.

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