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***Poverty and social exclusion in Angola:
a social vulnerability approach***

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ABSTRACT:

The present paper aims to discuss social vulnerability in Angola with especial attention to two related issues: poverty and social exclusion. The idea of qualifying a social vulnerability mainstream proposal identifies the reflection of questions as main challenge, such as: how to understand poverty and social exclusion in Angola and why to adopt the theoretical approach of social vulnerability?; among others. The theoretical proposals of social vulnerability approach explore four main dimensions: i) human assets; ii) households' assets; iii) financial assets; and iv) social assets; forming a multidimensional set of exposure to risk of social groups and individuals. A matrix of social vulnerability indicators of Angola is presented. Additionally an empirical exercise focusing on the construction of Social Vulnerability Index to Angola is tested. The methodological construction of the index has been developed in two steps: i) a single composite exercise; ii) and a complementary composite exercise.

Key words: social vulnerability, measuring poverty and human well-being, human development.

Poverty and social exclusion in Angola: a social vulnerability approach¹

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1. Introduction

The themes of poverty and social exclusion have been being constantly revisited in the current economic literature. The truth is that both developed and less-developed countries, find themselves facing a set of questions that articulate and feed poverty conditions and exclusion of individuals and population groups. It is necessary to understand that the problem of poverty and social exclusion is rooted on the constitution and operation of social and economic structures. The political and cultural factors also contribute for the consolidation of singular outlines in this scenery.

The theme of poverty and social exclusion has been being the main concern of different school of thoughts and research institutions, stimulating thus different forms of measuring the poverty and characterizing the social exclusion. The incentive to develop works on this thematic is, above all, due to two mainstreams: the nations' continuous economic growth in the last decades; and the manifestation of the poverty and social exclusion in an increasing scale as well.

Analyzing the block of developed countries that sum 63 in a sample of 177 countries, according to ONU's ranking measured by the Human Development Index – HDI (Human Development Report 2006), is undeniable to recognize that the economic growth was expressed through the well-being level for the population of these countries. But, it is also true that the social conquests in these countries were placed in check

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according to the well-being parameters, and they have been being gradually disarticulated by the new structuring patterns of work relations. The increasing problem of poverty and social exclusion in these societies is directly correlated to the restructuring of paradigms in the societies that achieved the development on industrial organization basis.

On the other hand, as the case of the Sub-Saharan Africa countries and, therefore, the Angola's Case, the well-being conquests under the aegis of well-being State never arrived. The disarticulations of the structures of the work world, the consumption levels, the social protection chain, among others, present other outlines in these countries. In these areas, where the manifestations of poverty and social exclusion flourish in a more alarming way, the analysis of these phenomena demands a sharpened instrumentation and an imagination beyond the discussed causes as being consequence of the paradigms restructuring of the postindustrial societies. According to Sen's analysis about Africa [2000, 127] "the three characteristic used for the approach of the basic capacities privation, in which I have concentrated when comparing and contrasting the nature of the privation, in Sub-Saharan Africa - premature death, undernourishment and illiteracy - obviously do not supply a comprehensive picture of the poverty in function of the capacities in these areas. However, they evidence some evident deficiencies and some crucial matters for politics that require immediate attention."

In this composition of factors that makes the specialists to face the same phenomena - poverty and social exclusion – but with distinct frames, the reflection about the phenomena becomes essential as an image reflected by a fly's-eye lens⁴, thus understanding that: i) the causes of poverty and social exclusion manifestations are found in the operation of each political, economic, social and cultural system; ii) given the different structures of the societies, the problem of poverty and social exclusion can be translated by a conjugation of factors, almost always singular to the structure of each country, reflecting distinct composition and intensity of problems; iii) the multidimensional understanding of the phenomena can not be left to a simplistic instrumental, demanding thus the capacity of translating the problem multiple dimensions from the choice of the instrumental of analysis.

In this paper, we propose a vision of the vulnerability from the understanding of two phenomena: poverty and social exclusion. The paper idea is to explore the themes of

⁴ The fly's eye is made of hundreds of smaller eyes. Each facet is a small lens with light sensitive cells underneath.

poverty and social exclusion with the goal of characterizing vulnerable individuals and population groups. Sen's papers (1992, 1993, 2000) were used as support points for the discussion about poverty and the characterization forms for the phenomenon. Castel's papers (1991, 1993, 1995) are the reference for the theme of social exclusion. In spite of not having developed specifically studies about Angola, these authors offer tracks for the structuring of the empiric study in focus in their countless papers. As for the theme of vulnerability, the paper took the theoretician-methodological framework developed recently by the Economic Commission of Latin America and Caribbean – CEPAL in Busso (2001) and Katzman (2000) as basis, where the social vulnerability theme is analyzed from the sewing of two themes that are the key for the contemporary discussion of the subject: poverty and social exclusion.

The wealth of the methodological proposition of this analysis is the discussion about the social vulnerability theme from a multidimensional spectrum, where the Angolan case study is based on the assumption of four thematic dimensions that reflect the exposure of the population to the social vulnerability, being these dimensions the guide in the choice of the indicators that captivate the problem. The idea of qualifying a proposal to trace the social vulnerability was motivated by the challenge of answering the next questions: how to understand poverty and social exclusion in Angola?; how to build a framework that qualifies vulnerable individuals and population groups?; how to measure and to compare the social vulnerability in Angola?; which challenges were found in order to identify vulnerable population groups in Angola?; among others.

The paper was organized in four sessions. The first session is composed by this introduction. The session 2 will discuss the theoretical framework that qualifies the theme of poverty and social exclusion as key pieces in the comprehension of the social vulnerability theme. The third session presents the indicators matrix of Angola's social vulnerability as consequence of the theoretician-methodological inference presented in the session two and according to the availability of the more recent country's databases. The Social Vulnerability Index - IVS for Angola its provinces was calculated in an experimental way. The IVS empiric construction follows the recommendations of Anand's and Sen's work. Some test exercises were accomplished to measure the correlation of the model variables in a complementary way. The fourth and last session explores a set of recommendations with the goal of evidencing the dangers of the matrix outline of Angolan social vulnerability in the context of the recently period of conquered peace.

2. Poverty, exclusion and social vulnerability

From the theoretician-methodological point of view, the discussion about poverty is structured on both aspects that compose the analysis: the identification problem - who are the poor people? ; and the aggregation problem - how to combine the poverty characteristics of different people in an aggregate measure? The identification process, which precedes the aggregation process, means the separation of the poor people and the not-poor people. This can be done of several ways, each one constitutes a different interpretation of the phenomenon. Now, the aggregate exercise tries to express the poverty characteristics of distinct people or groups in a sole indicator or index.

The used criteria when looking for a more accurate definition to identify the poor people can be objective or subjective. Most of the recognized works in the economic literature have been using the objective criterion, which involves two operational variants: the one that focuses the poverty from the relative point of view, and the one that defines the phenomenon through an absolute measure. In the first group, the poverty lines are defined using a set of assets considered common in that society as reference. The relative privation of an individual or a group is associated to the idea of having less than other individuals or groups in the society. In the second group, poverty is defined using an objectively defined minimum rate as reference, and the establishment of the poverty line is grouped according to two categories: arbitrary or observed. The arbitrary poverty line are defined through the establishment of estimated values necessary to meet the basic needs. For example, the adoption of US\$ 1,00 as daily value is observed for to extreme poverty line and US\$ 2,00 for the poverty line, according to the measurement of the World Bank – BIRD. Now, the poverty line measured through the observed consumption is based on the nutritional requirements that represent the values of a minimum adequate basic food basket, combined, in a simplified way, to a value of non-nutritive consumption. However, the adoption of this procedure depends on the available information about the populations' consumption structure, subjected to investigation through the researches of family budgets.

Nowadays, most studies have been adopting an absolutist approach for the poverty, using the value of the average families' income to identify and to estimate the number of poor people. The dominant approach for the poverty identification specifies a partition line, defined by a minimum level of income, below which the poor people is

measured. This approach offers a clear and very defined measure despite all its limitations.

In 1990, the human development issue gained renewed interest when the *Human Development Report 1990*⁵ placed the excess of preoccupation with the GDP's growth as central argument, and income had blurred the debate about the well-being theme. The discussion of this theme arose followed by the vision of understanding the well-being through its multiple aspects and, therefore, also the understanding of the multiple aspects that obstruct the achievement of the well-being. The studies on the poverty theme also gained a new breath and the contributions that emerged and clarified the conceptual and methodological framework are countless. These contributions were already being generated in academic circles during the 80's, but they only arose at full blast in the posterior decade.

Until the beginning of the 80's, the restrictions of the privation analysis through the optics of the income restricted the evaluation of life terms in a multidimensional perspective. Even the warm debate about the measurement of the poverty bottom lines, under the absolute or relative optics, had the traditional measurements of the poverty extension based on income as basis, in spite of exploring the inequality subject. From this period on, the researches start to reflect new ideas, specially with the contributions of Sen's studies for the subject that he qualified as *individuals' capacities*. His perspective enlightened the focus of the discussion on poverty condition by the optics of the capacities, and strongly pointed for the income restrictions as exclusive indicator of well-being or privation. In his analyses, he explored the countries behavior that maintained limited health services and basic education access in spite of having a high per capita income, reflecting a reduced life hope and high mortality and illiteracy rates. Or, countries with a high availability of food per capita, but still having nourished or starving parcel of population. This way, he disqualified the rule of parallelism between the economy performance and the population well-being condition, considered as unequivocal condition until then.

Sen's papers went beyond the simple proposal of using measures that were unique and, therefore, able to captivate the well-being problems without the singular specifications. I understand that the condition of [2000, 109-122] "...poverty should be seen as basic capacities privation instead of merely low-income level, which is the traditional

⁵ UNDP - *Human Development Report 1990. Chapter 1. Defining and measuring human development.*

criterion of poverty identification. The perspective of the poverty as capacity privation does not deny the sensible idea that the low-income is clearly one of the main causes of poverty, because the lack of income can be a primordial reason of the person's capacities privation (...). What the capacity perspective does in the poverty analysis is to improve the understanding of nature and causes of poverty and privation diverting the main attention on the means to the ends that people are willing to seek (also from a specific mean that generally receives exclusive attention, in other words, the income), and, consequently, for the freedom of being able to reach these ends. Although it is important to conceptually distinguish the notion of poverty as the inadequacy of capacity of the notion of poverty as low-income level, these two perspectives can not be entailed, once the income is a very important way to obtain capacities. And, in general, as greater capacities to live your life would lead to increase the potential of a person to be more productive and to earn a raised income, we could also expect a relation in which the increase of the capacity led to a stronger power of earning income, not the inverse. This last relation can be particularly important for the elimination of the income poverty. We are not saying that only better basic education and health services could directly elevate life quality; these two factors also increase the potential of a person to earn more income and, thus, to eliminate the poverty measured by the income. The more inclusive is the range of the basic education and the health services, the larger will be the probability that even the potentially poor population would have a better chance to overcome the penury."

In the middle of the 90's, the references to the exclusion notion arouse in the social politics context. This subject gained space in the academic universe through the papers of the French School, mainly with Castel⁶. This author had worked the exclusion concept in the sense of relegation, disqualification or social disaffiliation, considering not only those that could not pay the price of the progress being to the margin of the society and its evolution, but, also those that occupy positions in a system that were disconnected. It is important to emphasize that the underlying idea to the exclusion concept does not analyze the lower segments of the society. In Castel (1999, 33), "marginal segments (such as: beggars, impostors, thieves, prostitutes, among others) should not be mistaken with the ones that are in an exclusion condition. It is a crucial conceptual differentiation, because the exclusion notion, besides being saturated of

⁶ Castel, R .1993

significance, brings the idea of static dichotomy and, therefore, the-historical one. It also is crucial, because the word was associated to the idea of not being admitted, rejected or fired, already in the XIV Century. Afterwards, its becomes to designate someone with lacking of rights...in other words, it means restriction, separation or confinement, which examples are the *apartheid*, from Southern Africa until recently, or the North American black people, who were prohibited to enter in certain places in Southern State until 1960.”

The idea of the social exclusion is associated to the consequences that economic and political phenomena provoke, and they reach the structuring format of individuals and groups in the societies through the stretching of the social web. Kowarick [2003, 70] The theme is about the vast parcel of those who live at the margin, because they were disconnected or placed aside from the essential processes of the society. A vulnerability followed upon the unemployment, work insecurity situation, status degradation and loss of roots connected to the primary sociability is initiated.

[Sen, 117] “the income loss carried by the unemployment can be compensated, in considerable degree, by an income aid (including benefits for the unemployed), as usually occurs in Western Europe. The income loss could be suppressed in a wide range through the income aid for the involved individuals, if it was everything carried by the unemployment.....if however, the unemployment has other serious effects on individuals' life causing any kind of privations, the improvement obtained through the income aid would be limited in this case. There are abundant proofs that the unemployment has including effects besides the income loss, like psychological damages, loss of motivation at work, loss of ability and self-confidence, morbidity increase (even the mortality rates), disturbances of the family relations and social life, intensification of the social exclusion and accentuation of the racial tensions and the asymmetries between sexes.”

Now, the social vulnerability is notably a theme of a wide nominally notion wide that seems to fit well into the discussion of lots of social themes. According to UN⁷ recent evaluation, besides the countless excellent works, a great contingent of studies did not receive the necessary analytic rigidity. Rigidity one that enables the identification of the vulnerability specific situation. Therefore, it demands theoretical understanding and secure empiric construction.

⁷ United Nation Report on the World Social Situation 2003.

The vulnerability theme has been analyzed through different approaches. It is consensus that the vulnerability condition is originated from numerous sources, and rooted by multiple factors. Essentially, the vulnerability can be seen as an elevated state of exposure to certain risks and uncertainties, in combination with the reduced ability to protect or to defend themselves from adverse situations and, therefore, to deal with their consequences. Not always, the mapping of the vulnerability depends on the singular identification of causes and effects. As a matter of fact, almost always, this theme is associated to several factors that operate under the enchainment and interdependence effect. It is sure that the poor people and excluded groups constitute vulnerable population groups, or even though, groups that became vulnerable by not controllable events that led to poverty and exclusion.

Notably, the interest about the vulnerability theme has grown next to the international development agencies of the UN's system. In 2003, the *Department of Economics and Social Affairs – Division for Social Policy and Development* of UN, released the *Report on the World Social Situation*, which focus concentrates the attention on the theme of *Social Vulnerability: Sources and Challenges*, in a clear orientation to understand the sources and challenges of the theme, correlating it to poverty and of exclusion situations.

Now, CEPAL, has been approaching the vulnerability theme in its Population Division along with the Latin-American and Caribbean Center of Demography – CELADE since 2001. As a wide trajectory regarding studies about the denominated vulnerable population groups, CEPAL and CELADE have been accomplishing research activities with groups that are defined in politics as especially vulnerable. In these groups, we highlight: children; young teenagers; teenager mothers; older adults; ethnic groups (especially afro-descendants and American Indians); resident in precarious settlements of rural and urban zones; and residents aggregated in particular households.

In the last years, even the Population Division of CEPAL and CELADE, tried to renew their visions of the interrelations between population and the development. The studies pointed to some conclusions when approaching the processes that lead to the vulnerability of individuals and population groups. The first one reevaluated the traditional focus of the classification of vulnerable groups. In spite of its pertinence, the traditional approach introduces conceptual restrictions, and imposes limitations to the scope of public politics, which purpose is to foment the social equity. This is due to the fact that the notion of *vulnerable groups* has generalized and converted into synonym of

populations, when losing its specification, that are the target of transectorial politics. This way, the use of the concept of vulnerable groups refers to population groups with a wide spectrum of requisites and which satisfaction demands not only the sectorial focus. Nevertheless, it should be emphasized that is possible to identify population segments within generic vulnerable groups that must be the target of sectorial politics or transectorial specific.

In the context of the development present standard characterized by uncertainties, these conclusions on the vulnerability notion, have provided new conceptual tools in the comprehension of the forms of social disadvantage that limit the answer capacity of the individuals when facing the constant changes that are verified in the pattern of the contemporary societies. These changes have been inhibiting the society articulations through its institutional apparatus and the social actors (the State, the market and the communities), when the projects development result in social insert and establishment of the individuals identities.

The debate on the vulnerability also opened space for considerations on the social-demographic themes that are entailed to the poverty, considering that the demography of a good part of the not developed countries points to the relevance of themes, such as: the epidemiological profile of higher mortality and low life hope; the low development of the human capacities; the high fertility rates in young life cycles; among others. These factors complicate the permanence in the formal education system, the insertion in the work market and, above all, they are responsible for the inter-generation transmission of the disadvantages.

Still according to CEPAL's opinion, the development of the multidimensional approaches is necessary for the analysis for the social vulnerability sources. The fact that the theme requires an multidimensional exploration (anchored in the presupposes linked to economic, social, cultural, demographic, physical factors, among others) and demands theoretical and methodological secure advances, it is necessary to stimulate the production of numerous tests leading to the practice verification of causes and effects.

Considering the premise that the vulnerability concept demands a multidimensional exploration, a methodological approach would consider the identification of vulnerable groups from the exploration of distinct and complementary thematic dimensions appropriate. Such dimensions are concerning to linked elements to the individuals characteristics, regarding the access of goods and life cycle, as well as to those regarding to the social environment where they are inserted. The challenge in the design of a

vulnerability matrix is the relations exploration among the individuals and their environment. Thus, once that the social environment offers an opportunities set for the individuals, they also need to have assets to afford them. In this relation among individuals and their environment, the establishment of an indicators matrix that captivates the social vulnerability, should be composed by the observation of indicators that can be assembled in four dimensions⁸:

- **Physical Assets** – availability of infrastructures as energy, water, sewage, proper habitation, land, transportation, among others
- **Financial Assets** – access to financial instruments, credit, personal credit, micro-credit programs, income generation programs, among others
- **Human Assets** – that reflects the quality of the access to the health and to the education of the manpower of the communities and of its members;
- **Social Assets** – forms of social participation, communities with collective attributes, networks and reliable liaisons, solidarity, among others

The vulnerability can be understood as *“the inability of a person or families to take benefits from available opportunities in distinct socioeconomic scopes, in order to improve their well-being situation or to prevent their deterioration”*⁹. This condition would be the result of an imbalance or lack of synchronicity among the access requirements to the opportunities offered by the market, the State and the society, given the fragility or absence of assets.

It is understood that the basic issue focused by the concept is the weakness or the force of the assets that individuals (even the families, households, population groups) dispose to face disadvantages situations, uncertainties, changes or risks, existing in the vicinity, which implies the permanence or loss of the well-being condition.

It is also understood that the vulnerability picture is delineated from a conjunction of factors. In fact, the rupture of the vulnerability picture is centered in the identification of the strategies to develop assets that, added to individuals or population groups, become able to increase the answer potential to privation or exclusion situations.

⁸ Busso, 2001.

⁹ Katzman, 2000.

3. The Angolan social vulnerability matrix

Understanding the social vulnerability as a combination of factors that have affected or inhibit the well-being levels according to the exhibition to certain risks and uncertainties, this session seeks to approach this concept through the exhibition of a wide matrix of indicators and the establishment of a synthetic index *Social Vulnerability Index - IVS*. The idea of observing the territories will be explored according to the presence of assets that characterize the vulnerability of individuals and population groups in the four proposed dimensions by CEPAL and adopted for the establishment of the IVS as basis: i) physical assets; ii) financial assets; iii) human assets; and iv) social assets. Other indicators, especially the social-demographic one, were incorporated to the analysis, because they reflect the vulnerability situations of specific population groups in a complementary way. These groups were arranged in two special dimensions.

The main explored information were extracted from the MICSII 2001¹⁰ inquiry, which has the information gathering as main goal for the social indicators calculation related to the woman's (of 14-49 years old) and child's (less than 5 years old) situation. Despite its specific focus, the information derived from the application of the MICSII questionnaires enable the information investigative structuring in four cuttings: i) the household; ii) the members of the household; iii) the women; iv) the children¹¹.

It should be emphasized that this is the most update and comprehensive research by household sample held in Angola. Given to the lack of other researches, especially the census coverage ones, the MICII's data were used in spite of some presented limitations to the application of the methodological test proposed in this paper.

These limitations should be detached at the beginning. First, given to absence of information for all the Angolan territorial levels, the empiric-methodological test was built in two levels: the national and the provincial. Second, the application of the test considered the availability of the existing databases and the information statistical importance. As detailed, the MICSII research is directed especially toward to the woman's situation and childhood in Angola. This way, its utilization incapacitates the indicators perfect composition in the dimensions of the proposed social vulnerability

¹⁰Multiple Indicator Cluster Survey, UNICEF, 2001.

¹¹ Such cuttings have obeyed the following sizes in its sample base: i) 6.660 researched households; ii) 29.871 members of the researched households; iii) 7.090 researched women; iv) 5.663 researched children. As inquiry of the sample base, the MICSII researched agricultural municipal districts in urban and rural areas in the six macro-areas and in the 18 provinces of Angola. For security reasons, the access to the agricultural areas, as well as the information of this cuttings, was partially compromised.

approach. The authors of paper sought the best way to supply and to adapt the presented limitations, with the purpose of not jeopardizing the central idea of the test application. For representative effect, the social vulnerability to Angola was defined as:

$$F(VS) = DA$$

where *DA* represents *Normative Dimension of the Social Vulnerability in Angola*

$$DA = V1 \text{ Physical Assets} + V2 \text{ Financial Assets} + V3 \text{ Human Asset (1)}$$

The paper proposes the calculation of *IVS* Angola, translated into synthetic index. The *IVS* measures the vulnerability degree in the three basic dimensions (*VI*, *V2*, *V3*). This way, the normative dimension of the *DA* vulnerability is taken as basis, supported by Busso's contributions [2001], in a simplified way, and defined as in (1).

The Figure 1 summarizes the way the *IVS* was built to Angola. The social vulnerability captivated by the *Human Assets* was gained by the composition of two indicators: i) the knowledge level, represented here by *illiteracy rate of the head of the households*¹² ; and ii) the information on the households *that have not access to the quality water source* controlled by public service¹³ was used as a *proxi* variable of a long and healthy life. So, the *households without access to quality water source provided by public service* along with the *illiteracy rate of the heads of the households* compose the variables of the *IVS's Human Assets* block.

Now, the variables that express the *energy and gas utilization in the households* and the *households' floor covering* were used as indicators to measure the households *Physical Assets*.

To allow the *IVS's* elaboration, the households' information that characterizes the *households without electricity*¹⁴ was eligible as the *proxi* variable of the *Financial Assets*.

¹² Considering that low instruction turns an individual more vulnerable, increasing, for example, the risk of insertion in the world market.

¹³ The World Health Organization - OMS esteem that 25 million people in the world die per year due illnesses transmitted by water, such colera and diarrhea. In the not developed countries, 80% of the illnesses that had occurred are caused by the water contamination.

¹⁴ Kauffmann, C. *Energy and Poverty in Africa. African Economic Outlook* 2003/2004. OECD.

Figure 1. Composition of the Social Vulnerability Index - Angola¹⁵

<i>IVS</i>	<i>DIMENSION</i>	<i>Human Assets P1</i>	<i>Physical Assets P2</i>	<i>Financial Assets P3¹⁶</i>
	<i>INDICATORS</i>	<i>Illiteracy rate of the head of households</i>	<i>Percentage of the households without gas or energy infrastructures</i>	<i>Percentage of the households without electricity</i>
		<i>Percentage of the households without access to water source provided by public service</i>	<i>Percentage of the households without adequate floor covering</i>	
		↓	↓	↓
		SOCIAL VULNERABILITY INDEX – IVS ANGOLA		

The Table 1 determines the ranking of the *IVS* result for Angola and its provinces, which can be seen in the Graphic 1.

Table 1. IVS according to Angolan provinces.

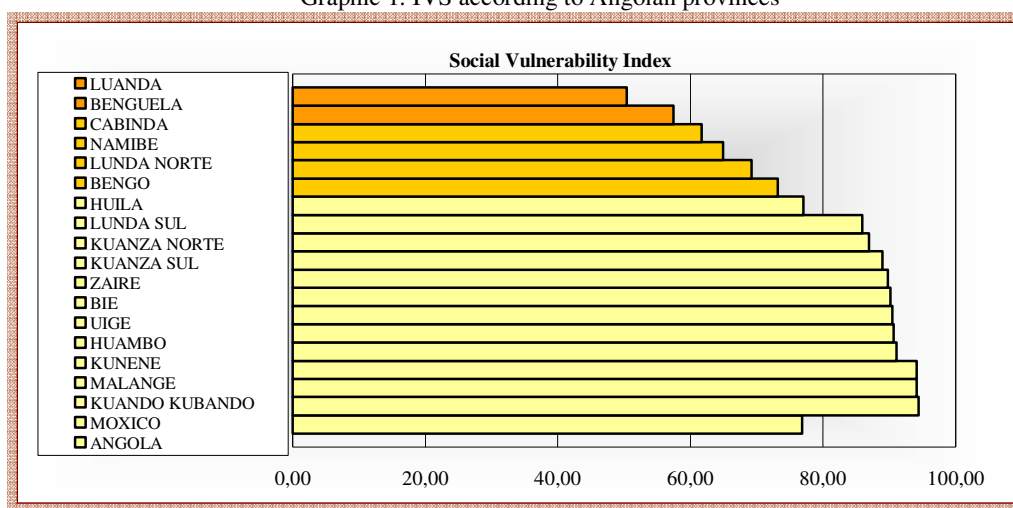
ANGOLA	76,90
MOXICO	94,37
KUANDO KUBANDO	94,14
MALANGE	94,11
KUNENE	91,10
HUAMBO	90,61
UIGE	90,44
BIE	90,19
ZAIRE	89,76
KUANZA SUL	88,99
KUANZA NORTE	86,90
LUNDA SUL	85,91
HUILA	76,99
BENGO	73,18
LUNDA NORTE	69,23
NAMIBE	64,91
CABINDA	61,66
BENGUELA	57,44
LUANDA	50,38

Source: MICS II, 2001.

¹⁵ $IVS-Angola = \left[\frac{1}{3} (P1^a + P2^a + P3^a) \right]^{\frac{1}{a}}$, where P1 corresponds to the human assets, P2 corresponds to the physical assets, P3 corresponds to the financial assets and $a = 3$. For a detailed analysis of the IVS Angola elaboration, please consult the technical note of the Human Development Report of 2006 at the IPH-1 mathematic formulation. Additionally, also consult the work of Sudhir Anand and Amartya Sen “*Concept of Human Development and Poverty: a Multidimensional Perspective*” and the technical note of the Human Development Report of 1997.

¹⁶ It should be clarified that *energy-poverty line* is methodological used in the África Subsahariana countries. To discuss this subject, see Brew-Hammond and Crole-Rees. *Reducing Rural Poverty through Increased Access to Energy Services: A Review of the Multifunctional Platform Project in Mali*. UNDP. 2004. To discuss this subject, see European Commission. *Energy Initiative for poverty eradication and sustainable development. Increasing access to energy for poverty eradication and sustainable development*. 2006.

Graphic 1. IVS according to Angolan provinces



Source: MICS II, 2001.

The indicators that compose the IVS (Table 1) constitute the space configuration of the vulnerability observed in the 18 Angola's provinces, and they are important instruments to subsidize the priorities and strategies definition for the identification and combat action against the social vulnerability. Luanda and Benguela stand out with lighter performances, in terms of relative, regarding to the relative social vulnerability of their populations. Moxico and Kuando Kubango present the worst performances of *IVS* Angola.

Additionally, other data were explored to compose the social vulnerability matrix (Table 2). The dimensions *DB* and *DC* were added to the work because they incorporate important aspects in the treatment of the specific picture of the country's social vulnerability. However, both dimensions *DB* and *DC* were not incorporated to the calculation of the synthetic indicator. This way, they do not constitute dimensions in the formation of the synthetic index IVS. The data in *DB* and *DC* were gathered according to the following cuttings:

- *DB. Special dimension 1 - Demographic Groups in the Family Cycle.*
- *DC. Special dimension 2 - Risks and Uncertainties to the Angolan Case*

Now, the observation of the Table 2 calls our attention for several asymmetries, even being observed a general picture of the territory social vulnerability, already defined by IVS.

In the special dimension *DB*, which reflects the profile of the families' life cycle, the demographic cutting was privileged with the goal of captivating the vulnerability within

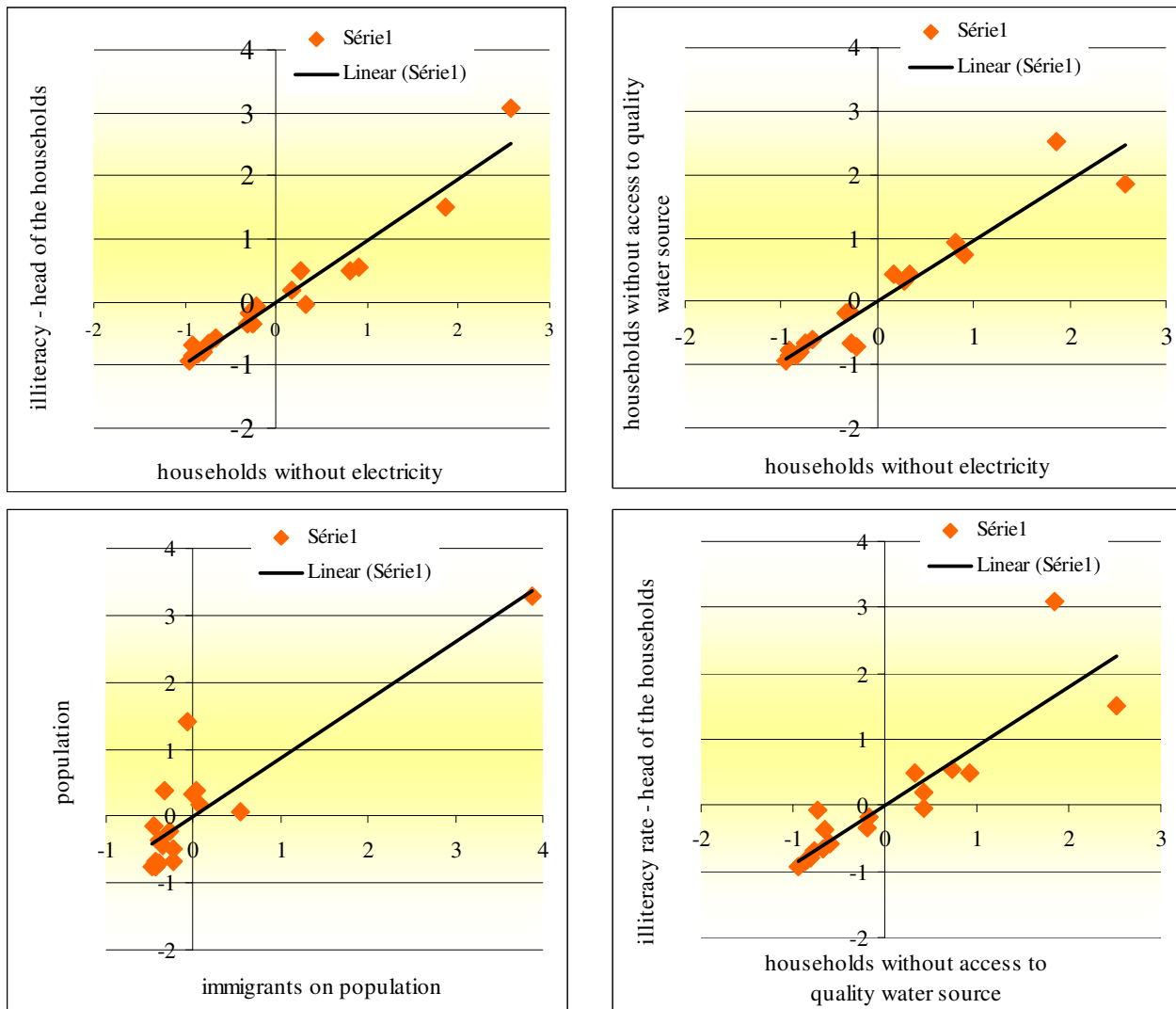
the population life cycle. The traditional cuttings of the demographic pyramid in the intervals from 0-4 years old, 5-14 years old, 15-19 years old and 20 years old and more were observed and the *youth dependency rates* was specifically calculated for this paper and represents, without a doubt, a great challenge due to its significantly high results; the association of this indicator with low educational levels is widely explored in the usual literature. A significant representation of population from 0-4 and 5-14 year old is also observed in a percentage way for all provinces. A young and numerous family, with lower human, physical, financial and social assets tends to be more exposed for social risks than another, with the same resources, but in a posterior phase of life cycle. The picture captivated by IVS in confront with other dimensions special selected, besides characterizing different situations of social vulnerability, allows a better comprehension of the vulnerability multidimensional phenomenon, pointing to the need of actions formulation that lead to combined situations. For example, actions that lead to the young families that combine the presence of children from 0-4 years old in risk condition. The databases also allowed the identification of the heads of the households by gender, in a clear intention of exploring the relation between vulnerability and gender.

Other indicators were added to the DC special dimension introduction and its sub-components. In this dimension, the indicators that deal with the effects of the war conflicts and that reflect standards of territorial immigration were considered. The DC special dimension is completed by other information, because they were evaluated as important for the analysis of the Angolan case. Those reflect the illnesses incidence that jeopardizes the longevity, as well as, the inadequacy information of protection methods against HIV/SIDA.

In the Graphic 2 series, the correlation coefficient was tested, in other words, the linear association degree between two variables, in four combinations situations, from the utilization of five variable: i) illiteracy rate of the head of the households and rate of households without electricity (energy-poverty line); ii) households without access to quality water source provided by public service and rate of household without electricity (energy-poverty line); iii) total population and immigrant population; and finally, iv) illiteracy rate of the head of the households and households without access to quality water source provided by public service. The reduced variables were used in order to have the analysis of the tested relations not affected by the averages, the variables variance and by the variables measure units. In the four exposed cases presented in the

Graphic 2 series, the linear association of the cases showed to be positively correlated, observing that most points are in the first and third quadrant of the dispersion diagrams. Notably, the variables were checked in a symmetrically way for all cases, presenting no distinction among elucidated variables and dependent variables¹⁷.

Graphic 2.



¹⁷ Hoffmann 1995 and Gujarati 1998.

Table 2. Social Vulnerability Matrix

	Angolas population (%)	Immigation on population (%)	Illiteracy - head of the households (%)	Women head of the households (%)	Youth dependency rate	Households without access to quality water by public service (%)	Households without adequate floor covering (%)	Households without gas or energy infrastructures (%)	Households without electricity - energy poverty line (%)	Illness in children aged 0- 4 years (%)*	Incidence of malária in children aged 0-4 years (%)*	Incidence of diarrhoea in children aged 0-4 years (%)*	Population of 15 years old or older who knows how to prevent against HIV/SIDA (%)
ANGOLA	100	20,2	52,70	26,516	0,91	73,0	82,60	83,30	82,60	24,80	63,70	21,00	37,40
PROVINCIAS													
CABINDA	1,10	16,6	36,43	16,876	0,94	51,8	67,18	70,08	67,18	31,05	81,10	22,59	58,54
ZAIRE	1,61	12,9	67,02	21,656	0,84	95,1	92,68	98,25	92,68	23,19	55,20	14,24	16,34
UIGE	7,82	15,4	52,51	25,551	0,83	80,8	98,96	99,97	98,96	35,52	68,07	19,53	22,74
LUANDA	24,82	38,0	31,67	16,420	0,80	60,3	54,56	46,40	54,56	21,80	71,57	25,98	76,58
NORTE	3,52	7,8	54,31	22,852	1,03	44,7	97,67	98,43	97,67	32,57	79,83	22,88	30,02
KUANZA SUL	7,73	5,3	51,93	27,780	0,87	91,6	96,78	93,91	96,78	33,57	59,67	17,64	16,35
MALANGE	4,68	3,0	74,76	35,189	0,98	91,4	99,44	99,03	99,44	24,47	54,54	21,45	10,60
NORTE	2,69	23,1	49,31	22,544	0,90	66,3	66,09	95,42	66,09	24,15	36,07	28,38	39,01
BENGUELA	5,85	38,9	46,32	27,700	0,78	22,4	63,00	68,59	63,00	35,09	64,08	26,36	43,73
HUAMBO	13,79	6,9	73,55	40,565	0,98	70,5	97,54	99,83	97,54	19,41	75,65	17,87	15,99
BIE	7,47	15,1	46,46	25,694	1,27	92,3	97,68	99,93	97,68	19,98	56,43	28,02	17,66
MOXICO	3,03	11,8	70,86	28,763	0,89	99,6	98,58	99,96	98,58	13,65	51,67	11,46	12,52
KUANDO KUBANDO	1,09	17,7	72,05	30,111	0,84	98,1	98,32	99,69	98,32	33,74	67,86	21,70	14,40
NAMIBE	1,60	38,1	40,42	23,638	1,08	56,9	71,57	69,23	71,57	32,40	67,17	28,36	29,25
HUILA	6,54	19,9	51,79	23,775	1,01	85,2	79,27	86,33	79,27	18,27	49,27	14,48	22,32
KUNENE	4,17	13,3	57,55	37,749	1,11	99,0	96,45	98,25	96,45	29,12	54,87	9,97	38,95
LUNDA SUL	1,39	21,7	54,92	20,297	0,85	76,1	91,57	99,98	91,57	21,55	58,55	19,40	23,99
BENGO	1,11	7,8	76,97	30,118	0,63	89,4	63,43	78,93	63,43	14,16	30,03	16,63	32,70
Source: MICSII 2001.													
Total of households that compose the sample: 6660													
Total of households in which the research was effectively realized, that is, the forms were total or partial answered: 6252													
* The form registered the occurrence of illness in the last two weeks that preceded the application.													

4. Final Concerns

Considering that social vulnerability has several dimensions, this paper proposes a vulnerability definition possible to be measured from the understanding of poverty and social exclusion themes. With bases in the available data by the MICSII research, the Angola IVS was calculated combining dimensions that captivate the behavior of three assets: i) human; ii) financial; and iii) physical. The indicators used to this test were: the illiteracy rate of the head of the household; the percentile of households without access to water source controlled by public source; the percentile of households without gas or energy infrastructures; the percentile of households without adequate floor covering; and the percentile of households not attended by energy coverage.

The selected indicators followed some criteria: i) to be part of the country's official information base; ii) to enable a treatment with significant statistics in provinces levels; iii) to be able to be used according to the theoretician-methodological framework of the proposed social vulnerability. Notably, should be emphasized that as soon as new information bases are produced to Angola, would be appropriated to revise the calculation exercise of IVS with more accurate variables to the investigative dimensions proposition.

The social vulnerability was conceived from its nature multidimensional. In the Angolan case, the performance of the majority of the variables will depend on public or private investments in infrastructure and the human development of the region where the households are established. Given the picture of low development, the evolution of the majority of the indicators will depend on the public politics coordination. A line of hypothetical poverty, chosen according to the *energy-poverty line*, has defined the poor and not poor populations in a first moment and in a normative character. This information should be re-evaluated as soon as new bases to Angola are available, but in the absence of more specific information, the same one is a good *proxi* for Sub-Saharan Africa, countersigned by countless research agencies and cooperation to the development.

The Table 2, which presents a data set that characterize the social vulnerability, should be attentively observed in order to have the simplistic causality effects aborted when understanding the faces of the problem in question. These data call our attention, specially, for important dimensions, considered in this article as special ones: i) the special dimension 1 – that observes the demographic profile and the population

mobility; and ii) the special dimension 2 - that observes the indicators behavior which restrict the longevity.

A first and conclusive data observation reflects the disparities and asymmetries of the social vulnerability of the Angolan case. The compositions that characterize the social vulnerability of the Angola provinces are heterogeneous. We call the attention for a picture of multiple and composition nature with varied intensities. In the context of exploration, the Luanda's province case is observed. This province reflects an alarming population concentration combining to a situation of a high migratory flow, even being the one that has better general performance of the IVS compared to other provinces. The migratory flow is associated to the war conflicts and other risks and uncertainties from economic and social order. In Luanda's specific case, the vulnerability is translated by the combination of factors that reveal poverty and exclusion. However, the situation of social exclusion should not be conceived as a simple economic or political phenomenon, because it reveals the stretch of the social fabric that is translated by the weakness of the relation liaisons generated by the population afflux.

When establishing positive associations among variables, which were checked in a symmetrical way, the tested correlations expose the fragility and perversity of the poverty situations, because they combine multiple privation situations. This demonstrates that, in the Angolan case, an action to combat social vulnerability should be developed according to varied and multi-thematic actions.

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