A study on multidimensional poverty in the state of Ceará from 2005 to 2015

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1

Summary
For a long time, poverty was defined only according to income insufficiency, but its concept has evolved and started to be incorporated into a series of predicates over time, referring not only to economic variables, but including other variables, such as the individual's level of education, health conditions, housing, sanitation, and insertion in the labor market. Thus, considering that northeastern Brazil, especially the state of Ceará, still has high levels of poverty and inequality, one can see how important this multidimensional approach to poverty is for the region, since it is classified as more complete and considers more qualitative dimensions, without excluding the income variable. Thus, the general objective of this work is to analyze the evolution and level of multidimensional poverty in the state of Ceará in the period from 2005 to 2015. To do so, the methodology of Bourguignon and Chakravarty (2003) was used, which takes into account a multidimensional approach to evaluate poverty. The data used is based on the National Household Sample Survey (PNAD). The conclusion of the six dimensions under analysis showed an increase in the proportion of multidimensional poor in the population of Ceará, from 38.33% in 2005 to 44.15% in the year 2015.
Keywords: Multidimensional poverty. Inequality. Deprivation.

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Resumo
Durante muito tempo, a pobreza foi definida apenas de acordo com rendimentos insuficientes, contudo, o seu conceito evoluiu e começou a ser incorporado uma série de previsões ao longo do tempo, referindo-se não apenas a variáveis económicas, mas incluindo outras variáveis, tais como grau. educação do indivíduo, condições de saúde, habitação, saneamento e inserção no mercado de trabalho. Assim, considerando que o nordeste brasileiro, especialmente o estado do Ceará, ainda mantém elevados níveis de pobreza e desigualdade, é evidente a importância desta abordagem multidimensional da pobreza para a região, uma vez que é classificada como mais completa e considera dimensões mais qualitativas, sem excluir a variável rendimento. Assim, o objectivo geral deste trabalho é analisar a evolução e o nível de pobreza multidimensional no estado do Ceará, no período de 2005 a 2015. Para tal, foi utilizada a metodologia de

Bourguignon e Chakravarty (2003), que tem em conta uma ferramenta multidimensional de abordagem para avaliar a pobreza. Os dados utilizados baseiam-se no Inquérito Nacional por Amostra de Domicílios (PNAD). A conclusão das seis dimensões em análise mostrou um aumento na proporção de pobres multidimensionais na população do Ceará, de 38,33% em 2005 para 44,15% em 2015..

Palavras-chave: : Pobreza multidimensional. Desigualdade. Deprivação.

2

1 Introduction

The theme of poverty has become an increasingly debated issue in the last decades and has aroused interest in academia, international organizations, governments, and civil society alike. It is an issue of the utmost importance for the social sciences, including economics, and has gained prominence in these areas. The contemporary debate is related to the issue of economic and social development, and its study has evolved in the sense that there is a broader conceptual discussion, with new approaches and the introduction of new measurement mechanisms, reflecting on the definition of policies that aim to tackle the negative effects on society.

For a long time, poverty was defined only according to income insufficiency, but its concept has evolved and started to be seen as a phenomenon of varied dimensions to be explored, associated to a series of predicates, which refer not only to economic issues, but include other variables in the scope of "deprivations at social, cultural, and political levels, such as the conditions of education, health, housing, sanitation, and insertion in the labor market". In this spirit, in the conceptual scope, the most striking evolution refers to the change from the one-dimensional perspective to a multidimensional approach to poverty (PONTES, 2015).

The concept of multidimensional poverty has been in common use since 1995, after the publication of the first Human Development Report (HDR) of the United Nations Development Programme (UNDP) in 1990, in which definitions of poverty were directed towards the theories of human development, with Amartya Sen as the main exponent. This multidimensional approach aims to address issues not yet explored in the literature,
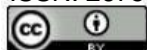
shortcomings of the indicators used for its measurement, and may introduce a set of indices to understand the complexity of poverty and better define public policies to suppress it (PONTES, 2015). When analyzing poverty as a multidimensional phenomenon, two approaches are quite evident: the basic needs approach and the capabilities approach.

Poverty and income inequality among individuals have marked the process of economic formation of the country. The fight against poverty affects substantially the Brazilian northeast. There have been many recent actions to combat poverty in the Northeast, especially for the state of Ceará, however, it has not been enough to combat the high levels of poverty.

It cannot be denied that there was a considerable reduction in poverty and extreme poverty in Brazil, the Northeast and Ceará during the period from 2002 to 2014, due to monetary stability, greater economic growth, the strengthening of public policies, with emphasis on the real increase in the minimum wage, expansion of popular credit, the expansion of education, and the reformulation and intensification of income transfer programs for the lower layers of the population. As a result, there was an improvement in the lives of millions of Brazilians, and the overcoming of poverty and indigence, but the Northeastern states still have almost half of their population living in poverty and in a very poor quality of life. When it comes to Ceará, it is stated that the state, despite representing only 4% of the total population of Brazil, "contains more than 9% of the entire Brazilian extremely poor population, when measured by the poverty line adopted by the Ministry of Social Development and Combating Poverty (MDS)" (MEDEIROS; NETO, 2011).

Despite all the social programs offered by the Brazilian State to the disadvantaged classes, the Northeast, especially the state of Ceará, continues to be a place of great concentration of poor families and great social inequalities. In this way, the following questions arise: Do social policies still need to be redimensioned and better structured, especially for Ceará? How can the multidimensional character of poverty influence the better formulation of public policies to face this problem?

Thus, considering that the Northeast region of Brazil, especially the state of Ceará, has a low level of development and still has high levels of poverty and inequality, this

4

research is justified by the intent, from the broader concept of poverty as a multidimensional phenomenon, to collaborate for the formulation of better and more efficient public policies to confront and combat poverty, It also contributes to the expansion of investments in health, education, services, and basic rights (housing, water, transportation, and sanitation, among others) in order to socially promote citizens, minimize the adverse effects of poverty, and provide a better quality of life for the population of Ceará.

The general objective of this work is to analyze the evolution and level of multidimensional poverty in the state of Ceará in the period from 2005 to 2015. More specifically, the research seeks to perform a historical contextualization on poverty and social inequality in Brazil and the Northeast, emphasizing the role of the State in the process of intervention in the social area and in the formulation of public policies to combat poverty and also to identify the main conditioning factors of multidimensional poverty in Ceará.

The methodology presented was constructed by Bourguignon and Chakravarty (2003) and treats poverty as a phenomenon of multiple dimensions (or multidimensional), by specifying a poverty line for each dimension.

The research was carried out using the National Household Sample Survey (PNAD) for the years 2005, 2009, and 2015. Ten years will be evaluated, starting in the 2000s, that is, from 2005 to 2015. The selection of this period was motivated by the fact that in 2005 the Workers' Party (PT) had already been in office for two years. The years 2005 and 2011 were the period of Lula's government, and in 2015, the period of Dilma's government, the beginning of the political and institutional crisis.

This study is basically structured in five sections. The first is this introduction. The second section provides a contextualization of poverty and social inequality in Brazil and in the Northeast region, as well as the role of the State in the development of public policies to combat poverty and its mode of intervention in the social area. In the third section, the methodology is specified in which the database and the construction of the dimensions
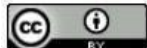
used are presented. In the fourth section, the results of the model are evaluated. The last section deals with the final considerations of the work.

2 Literature review

2.1 Poverty and social inequality in Brazil and in the Northeast: a historical contextualization

The conceptual discussion in the last decades about poverty has gained a series of predicates and instigated a greater interest since it has been "a source of worldwide concern and the same goes for the strategies to overcome it, such as the development projects of the United Nations Organization (UNO), through its agencies and bodies that deal with specific issues (United Nations Development Program (UNDP), the International Labor Organization (ILO), the Food and Agriculture Organization (FAO), the World Health Organization (WHO), among others" (QUEIROZ; REMY; PEREIRA, 2010, p. 02).

For FALVO (2010 p. 09) the understanding of poverty and social inequality in Brazil requires a multidimensional approach and its complex facets, taking as a starting point the historical elements of formation of the country marked by extreme concentration of wealth, highlighting the "land ownership structure, the formation of the urban labor market, the design of social policies and regional imbalances. At the same time, one must take into consideration the dimensions of social welfare, which include both human needs (education, health, housing, food, among others) and the income variable, as well as cultural and psychological aspects.

Historically, the generation of poverty in Brazil derives briefly from three factors: the way in which the agrarian issue was addressed, the structural problems of the national labor market, and the model of social policies created by the Brazilian State. In this way, the Brazilian land ownership structure, which was based on large latifundia, meant that the large rural poor did not have access and the right to land ownership. With the introduction of the automation system in the countryside, the capacity to accumulate and demand for labor was reduced, thus causing the migration of a great mass of workers to the cities at
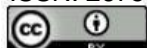
the same time that the urbanization process was growing in the country. Due to this acceleration of the migratory process, the urban labor market was unable to absorb the large mass of workers, causing a larger number of unemployed and miserable people, perpetuating poverty even more. Moreover, it is clear that, in many cases, social policies for income distribution are ineffective and reflect the characteristics of the Brazilian State, which is dominated by private interests and by the union of high social classes that exclude popular participation (SILVA, 2005).

Brazil, despite the various actions aimed at the social area and being a country highly rich in natural resources, holds one of the greatest social inequalities in the world, presenting itself as an unfair country with regard to the distribution of resources, access to basic goods and social issues (QUITES, 2013). Corroborating this idea, Werthein and Noleto (2003, p. 19), state that Brazil is an "extremely unequal and structurally unfair country. One of the most unequal countries on the planet, where this inequality has been a permanent and striking feature of the economic and social structure".

According to Barros, Henrique and Mendonça (2000, p. 141), the description related to the structure of poverty is that:

> Brazil, at the threshold of the 21st century, is not a poor country, but an extremely unfair and unequal country, with many poor people. Inequality is at the root of poverty and fighting it becomes an imperative. An imperative of a social project that must face the challenge of combining democracy with economic efficiency and social justice. A classic challenge of the modern era, but one that takes on urgent contours in contemporary Brazil (HENRIQUE AND MENDONÇA, 2000, p. 141).).

It is important to note that poverty in Brazil, throughout its historical process, stems mainly from a scenario of extreme inequality, which consequently developed a totally exclusionary and concentrating social and economic system, and its worsening occurred in the same dimension or even accompanied by the development of the capitalist system, associated with the processes of industrialization and urbanization of cities, noting that the latter was driven by the rural exodus, in which people were forced to migrate towards the cities, seeking better living conditions and employment (SILVA; SOUZA JUNIOR, 2012).
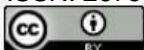
According to Falvo (2010, p. 16), when observing the 2000s it was found "that despite the low growth rates of the national product, the gap between social classes narrowed considerably, reaching the lowest level of the last 30 years. In relation to income distribution, it was analyzed that there was an increase and this was mainly due to the adoption of social programs aimed at the lower layers of the population.

In comparison to the population contingent, Brazil was one of the countries that contributed significantly to the global achievement of target A of MDG1 (Millennium Development Goal) - "reduce extreme poverty by half of the 1990 level by 2015". While global extreme poverty fell by half - from 47% in 1990, to 22% in 2012 - Brazil, managed to reduce extreme poverty to less than one-seventh of the 1990 level: from 25.5% to 3.5% in 2012, i.e., in the UN metric Brazil turned 25 years in 8 (NATIONAL REPORT MDG ACCOMPANYING, 2014).

According to IPEA (2016), the number of extremely poor individuals in Brazil has reduced from 27,659,557 in 1990 to 8,191,008 in 2014. As for poor individuals, between the years 1990 and 2014, the decrease was from 58,119,829 to 25,888,565.

However, although poverty levels have decreased greatly in Brazil, many of its characteristics remain the same, such as, for example, the geographical aspect. When looking at the Northeast region, it is found that it remains one of the poorest regions in Brazil, where the worst social indices persist (SOARES et al., 2016).

It is observed that Brazil presents a great imbalance between the regions that make up the country, that is, there are large regional disparities. Thus, when comparing the Brazilian northeast to the other regions of the country, it is noted that, although it represents 28% of the population, it concentrates more than half of the extremely poor population (MEDEIROS; NETO, 2011).

According to Mendonça (et al., 2010), in 2008, the poverty rate in the Northeast was more than double that of Brazil, which was 20.26%, while in the Northeast it was 50.15%. It is worth pointing out that the worst social indicators are still concentrated in the rural areas of the Northeast, more precisely in the semi-arid region, as a result of inequality in land ownership, of the exploitation system that has low productivity, of the
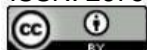
implementation of public policies that are limited, and of the climatic conditions that are unstable and often unfavorable.

More specifically, it is stated that Ceará is the 8th most populous state in the country and represents approximately 4.36% of Brazil, "but contains more than 9% of the entire Brazilian extremely poor population, when measured by the misery line adopted by the Ministry of Social Development and Combating Poverty - MDS" (MEDEIROS; NETO, 2011, p. 23).

Ceará, in the year 2011, had a little over a million people living in extreme poverty (indigence), equivalent to 10.6% of the population residing in the state, occupying third place in the order of the states with the highest number of people living in extreme poverty and in the proportion of individuals living in poverty - proportion of poor people - among the Brazilian federative states, as shown in the tables below (IPEA, 2016).

Table 1: Number of extremely poor and poor individuals in Ceará - Poverty Lines Based on Calorie Needs

Years	Number of Extremely Poor Individuals	Number of Poor Individuals
2002	2.019.136	4.298.601
2003	2.201.543	4.470.062
2004	2.069.790	4.502.109
2005	1.950.738	4.129.759
2006	1.625.764	3.746.994
2007	1.546.241	3.600.725
2008	1.138.074	3.214.454
2009	1.233.824	3.046.878
2011	1.175.435	2.807.950
2012	977.735	2.409.165
2013	927.434	2.383.155
2014	812.632	2.155.936

Fuente: IPEADATA, 2016.

The attenuation of extreme poverty and poverty "in Ceará can be explained by national income transfer policies, the high GDP in 2010, the growth of the state GDP, above the national GDP, and the reduction in income inequalities registered in the last decade. However, the challenges are still immense, because "Ceará still has the 3rd largest contingent of poor people in the country," which requires, on the one hand, much dedication

and targeted policies to combat its effects and, on the other, income generation in the state (OLIVEIRA, 2014).

2.2 Conceptualizing poverty as a multidimensional phenomenon

The debates about the problem of poverty are a much explored subject, either because of the numerous public policy projects aimed at combating it or because of the variety of studies that seek to assess and measure it. Thus, to address the problem of poverty, it is necessary to consider it from a multifaceted perspective, which is a very complex task involving a number of factors, such as education, cultural aspects, and economics (VALE et al, 2010).

Poverty is usually measured as scarcity or insufficiency of income. However, income alone as a form of poverty measurement is inaccurate both because it is difficult to provide totally correct values, as these values are often distorted, and because it may run the risk of not estimating real poverty (CALDAS; SAMPAIO, 2015).

The lack or insufficiency of income are elements of great importance in the argument about poverty, or deprivation, but it is worth pointing out that it should be understood by several facets. Thus, poverty can be understood from a monetary perspective, related to insufficient resources and budget constraints that hinder the provision of vital needs such as food, hygiene, health, clothing, education, leisure, among others. Poor people are then considered those who, "besides not having enough income to meet their needs and no access to other alternatives to meet them, are not valued and respected as citizens" (FRONZA, 2010, p. 06).

The multidimensional conception of poverty had already been gaining strength among international bodies linked to the United Nations and started to be commonly used in 1995. In 1990, after the publication of the first Human Development Report (HDR) of the United Nations Development Programme (UNDP), definitions of poverty were directed towards the theories of human development, with Amartya Sen as its main exponent (CURRALERO, 2012).
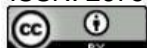
Thus, the studies conducted on the theme of poverty were currently reviewed by different conceptions of which was used in the last century and the studies presented by Amartya Sen on the character of poverty, revealed new areas of study, "where other variables besides income were incorporated into the analysis of poverty" (SANTOS; CARVALHO; BARRETO, 2015).

In this perspective of multidimensional poverty, Sen (2010, p. 12) states that "income is only a means, but never an end in itself for its eradication. Thus, poverty is a subjective phenomenon and relates to quantitative order variables (such as income) and qualitative factors. "To consider poverty as a phenomenon that, naturally, has multiple dimensions, means to admit that people's quality of life is related to factors of both physical and social nature". It is worth pointing out that the monetary perspective should not be excluded from the understanding of poverty, since the multidimensional perspective appears to complement it. Thus, "scientific thinking about poverty has evolved toward increasingly complex concepts that aggregate a greater number of variables" (RIBEIRO, 2013, p. 05).

When analyzing poverty as a multidimensional phenomenon, two approaches are quite evident: "the basic needs approach and the capabilities approach". According to Araujo, Morais, and Cruz (2013, apud PONTES, 2015, p. 11) the basic needs approach became more prominent and relevant in the 1970s, influencing certain international bodies with regard to policies.

The term "basic needs" is associated "with access to food, health, education, housing, and security among others. In a more generalized way, it can be said that the non-satisfaction of these basic needs implies physical and social burdens to the individual" (RIBEIRO, 2011, p. 09).

The basic needs concept lists other determinants for the analysis of people's quality of life, removing income from the center of the issue. This approach goes beyond physical and biological needs and encompasses a more complex view of human needs such as health, education, housing, sanitation, and the labor market. Thus, this idea
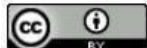
includes other aspects of people's daily lives, since they not only eat, but also work, live together, relate to each other, thus having a social life (SANTANA, 2012).

Moreover, this perspective is a significant advance for research and the definition of strategies to combat poverty, given that it examines the multiple dimensions of this phenomenon and thus incorporates other variables that enable a more comprehensive look at the conditioning factors of poverty. It is noteworthy that, in addition to income, other variables are now considered and play a relevant role in measuring the effects on the quality of life of individuals. Thus, it turns not only to the "satisfaction of the 'basic needs' of the individual in a particular way, but also in the fulfillment of various needs relating to the collective environment, to society" in general (RIBEIRO, 2011, p. 12).

Thus, the indicators of poverty according to this approach include immaterial aspects that provide a dignified life for individuals. In this context, this conception makes use of social relations, considering that the conditions of existence go far beyond material and individual aspects. Consequently, they insert a social and political dimension to poverty (ESPÍNOLA; ZIMMERMANN, 2012).

Regarding the capabilities perspective, "poverty is related to the deprivations of basic needs" endured by individuals as already mentioned, as well as the lack of opportunities to achieve some acceptable levels of functioning. The relevant functions for this analysis can range from physical aspects such as nutrition, possessing quality health to more complex points such as being happy and holding participation of social life (OLIVEIRA; SOUZA; JUNIOR, 2015).

According to Amartya Sen (2001, apud SILVA, 2009) this argument is reinforced when he states that "the concept of poverty cannot be related exclusively to the notion of income insufficiency", but should be understood in a deeper and broader way. We speak, therefore, of "poverty as a deprivation of basic capabilities that leads to vulnerability, exclusion, lack of power, participation, and voice, exposure to fear and violence - in short, exclusion from basic rights and well-being. However, Sen highlights and considers that "low

income is one of the factors that generate poverty, since the lack of income can be an essential reason for the deprivation of capabilities" (REGO; PINZANI, 2013, p.12).

Moreover, the "capability approach" brings with it two substantial conceptions, namely: freedom and equality. The perception about the conceptualization of capabilities is closely related to freedom, since it is through the full satisfaction of freedom that the capabilities are efficiently met. It is "the primary end and the main means of development" (SEN, 2010, p. 52). Regarding the principle of equality, Sen (2010, p. 54) states that "equality needs to be evaluated in terms of capabilities and not opportunities", given that there are several elements that make individuals different from each other. "Thus, even in the face of equal opportunities, not all people can have their basic capabilities satisfied due to the particularities of each one" (SEN, 2010, p. 52).

Therefore, it can be said that the analysis of capabilities has as its main axis to provide human welfare, advocating access to a healthy standard of living, in which people can have political and civil liberties and enjoy all the privileges of citizenship (ESPÍNOLA; ZIMMERMANN, 2012).

2.3 State: its role in social intervention and in the formulation of public policies

The origin of the State tries to be explained by several theories, but the one that stands out the most is the one that states "[...] that the State arose from the need to break between barbarism (social disorder) and civilization. In this sense, men choose to transition to civil society by building political power and laws. Precisely because of this, the change from the State of Nature (which according to Hobbes is the state of "all against all", in which men fight among themselves for power) to civil society takes place after the Social Contract. In which "the State is formed by an agreement or pact, between a group of men, this being a unit of absolute power, having the obligation to represent the collectivity". Thus, this passage, which is mediated by the Social Contract, allows social rights, considered natural rights, in force in the State of Nature, to be secured and offered with greater effectiveness by the State (CHAUI, 2009, p. 14).
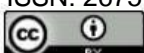
According to Friede (2007, p. 21), there has been an evolution throughout history on the concept of the State. As the author states, "it emerges from the term polis in Greece, civitas in Rome and state during the Middle Ages. Although there is a diversity of ways to define it, a State can be understood as any association or group of individuals located in a certain territory, endowed with supreme power. Thus, there is an essential tripod: territory, people and sovereignty. According to Netto (1986, p. 42, apud SCHEEFFER, 2014), "State is the necessary society in which is observed the exercise of a government endowed with sovereignty to exercise its power over a population, in a certain territory, where it creates, executes and applies its legal system, aiming at the common good".

A great dilemma present nowadays refers to the role of the State in society, and these differences can be considered as a basis for political differences, divergences regarding the function performed by the State. Based on the principle that the "State is the main agent when it comes to the provision of public policies", as well as in counteracting and combating public problems, whether economic, social or in other sectors, this discussion is extremely relevant (SCHEEFFER, 2014, p. 10).

There is no consensus in the economic literature, but some studies point out that after the first results of economic and financial globalization, the market is unable to ensure social integration and development, and only through the effective action of the State, through efficient public policies, will happen the reduction (and not extinct) of social inequality and poverty to plausible and significant standards (ALVES; VILELA; RODRIGUES, 2013).

In this sense, Couto (2006, p. 23) "points out that the realization and guarantee of social rights depend fundamentally on state intervention, this being linked to economic conditions and the state tax base to be ensured. Their realization depends on the realization of social policies of a public character, executed from the intervention of the State. "They constitute rights to provide services or credits, generating obligations on the part of the State, which has the responsibility, through the planning and execution of

policies for the well-being of the citizenry," to respond to the needs of the diverse layers of society, especially those of the least favored.

The development of coping strategies requires the understanding of the external, political, economic scenario and the way of insertion of the country in the context of economic and financial globalization worldwide for the implementation of public policies (BARBIERI; RIBEIRO, 2012).

In this perspective, the State becomes the one that regulates and acts as mediator in the social area, in which, through social policies, it can enable the reduction of inequality and poverty rates, produced by socioeconomic development and by the Capitalist system in force, seeking to develop actions for the social, for the disadvantaged strata and not for the dominant class (bourgeois class) (WLODARSKI; CUNHA, 2005).

Therefore, in modern societies, it is the State's duty to offer effective public policies that meet the wishes and various demands of society. Thus, for the state functions to be exercised with authenticity, it is necessary to have planning and constant interaction between governments and society, so that agreements can be made based on the lines of action of national and international organizations that guide the formulation and implementation of public policies (DALLAGO, 2007).

3 Methodology

3. 1 The Multidimensional Poverty Index (MPI)

According to Bourguignon and Chakravarty (2003), weighting the prospect of being deprived into the indistinct scope of poverty is a simplified method of interpreting it and of counting the number of poor. Defining the poverty indicator variable is one way of doing this. A multiple dimension perspective defines poverty through a vector of singular aspects (TSUI, 2002 apud SILVA et al, 2014).

It is stated that a Multidimensional Poverty Indicator (MPI), in general terms, can be represented as a function:

$$P(X,z):M \times z \rightarrow R_+^1$$

Where "$X \in M$ is a matrix of attributes, such as income, education, health, (n x m), for $i = \{1,2,...,m\}$ persons and $k = \{1,2,....m\}$ dimensions, $z \in Z$ is a vector of limits or "minimally acceptable levels" for different attributes" (BOURGUIGNON; CHAKRAVARTY, 2003, apud SILVA et al., 2014, p. 10).

It is possible "to elaborate an index through at least three distinct methodological optics: a) the axiomatic approach; b) the theory of fuzzy sets and; c) the information theory" (MAASOUMI; LUGO, 2008 apud SILVA et al., 2014, p. 10).

According to Bourguignon and Chakravarty (2003) - a global multidimensional indictor - can be divided and corresponds to the fundamental assumptions, it is defined as:

$$P(X,z) = \frac{1}{n} \sum_{i=1}^{n} f \begin{pmatrix} \max\{0; (1 - \frac{x_{i,1}}{z_1})\} \\ ,..., \max\{0; \left(1 - \frac{x_{i,k}}{z_k}\right)\} \end{pmatrix} \quad (1)$$

Or as follows:

P(X,z)=1/n ∑_(i=1)^n f(X_(î,1),...,X_(î,m)) (1.1)

To establish f ($\cdot$) by binding approach and using a variation on Foster's index, Greer and Thorbecke (1984 apud SILVA et al., 2014) in order to ascertain the level of poverty severity, it becomes possible to measure multidimensional poverty as:

$$P(X,z) = \frac{1}{n} \sum_{i=1}^{n} f \left[\frac{1}{m} \sum_{i=1}^{n} x_{\hat{i},k^2} \right] \quad (2)$$

In formula (2), one can consider that the perspectives are irreplaceable, but correlated with the generalized degree of poverty, which is consistent with an approach that is based on welfare approaches. With regard to the individual aspect, greater intensity is given to the dimensions that denote a higher Deprivation Gap, and after that, greater weight is given to individuals who have higher levels of deprivation. Such a model makes the index sensitive with respect to the spread of poverty. Being observed at the individual

level, poverty can be defined by: P_i 1/m $\sum\_{(i=1)}^{n} X\_{(\hat{i},k}^2)$, considering a maximum value of 1, where it is configured as total poverty and a minimum of 0, identified as no poverty (SILVA et al, 2014).

According to Silva et al. (2014, p. 11), "incidence rates (proportion of poor people) and degrees of deprivation for different regions and demographic groups" can be estimated correspondingly for each dimension. In the case of the incidence rate, it is taken into account that all individuals who are "under the threshold of at least one variable, suffer deprivation (forced union), according to the following rule" (SILVA et al., 2014, p. 11):

$$SofrePriva\text{ção}= \begin{cases} Sim; \ se \ X_{\hat{i},k} > 0 \\ N\tilde{a}o; \ se \ X_{\hat{i},k} = 0 \end{cases} \qquad (3)$$

As Silva et al. (2014) state, the degree that each person suffers deprivation corresponding to each index that can be directly measured by $X\_{(i,k)}^l$ although the level of individual deprivation in any perspective is established by the aggregation function $gk(.)$ as follows:

$$X_{i,k=\frac{1}{p}} \sum_{l=1}^{p} X_{i,k}^{l} \qquad (4)$$

Based on the following function, "the indicators aggregate for each dimension: $X\_{(i,k}= g\_k (X\_{(i,k)}^l,...,X\_{(i,k)}^p))$ for variables l = {1, ..., p}, where the function $gk(.)$ is peculiar to each dimension k" (SILVA et al., 2014, p. 11). In this way, the indices, in their entirety, have a maximum value of 1, which corresponds to the degree achieved, and a tiny value of 0, referring to total deprivation. Thus, this description is used with the intention of reducing problems of discontinuity.

3.2 Data Source and Dimension Construction

In order to construct the indicators and dimensions that constitute multidimensional poverty, the database used was the National Household Sample Survey (PNAD) for the years 2005, 2009 and 2015. The choice of this period is justified by the fact that in 2005 two years of the Workers' Party (PT) government had already passed. In 2005 and 2011,

the Lula government was in office, and in 2015, the Dilma government was in office, the beginning of the political and institutional crisis. Six dimensions were considered in this study in the formulation of a multiple dimension indicator, as shown in Table 1. It is important to note that in addition to the six dimensions, twenty-nine (29) variables stemming from the original variables were deduced from the PNAD. These variables were selected, according to the research conducted on the theme of poverty, from two perspectives: the basic needs theory and the capabilities theory.

The reason why the PNAD was used as a data source is because of its availability of material and information regarding the most recent period (from the year 2000 on), due to its annual periodicity (except for census years).

Table 1 shows the indexes $X_{(i,k)}^l$ prepared for i={1,2,...,n} persons, j={1,2,...,h} households and k={1,2,...,m} dimensions. All these indices hold a maximum value of 1 (not deprived) and another tiny value of 0 (total deprivation). The parameters are determined between 0 and 1 to decrease discontinuity difficulties, however, they are limited by data availability. In order to capture different conclusive data sets, different parallel levels are determined (meaning that the indicators are ordinal) (SILVA et al., 2014).

In each dimension based on the following function, the indices aggregate: $X_{(i,k}= g_{(k}(X_{(i,k,...,)}^1 X_{(i,k)}^p)))$ for variables l= {1, ..., p}, where the function $gk(.)$ is singular of each dimension k. As a way to detect "the deprivation level of each dimension, the reformulation of the indices is performed using the formula: $X_{(i,k)}=1-X_{(i,k)}$, where the deprivation level $X_{(i,k)}$ is understood to be the relative Gap between the individual level of X_k and the initial deprivation threshold $Z_k=1$, with a maximum value of 1 (total deprivation) and a minimum of 0 (no deprivation)" (SILVA et al, 2014, p. 11).

Table 1: Multidimensional Poverty Dimensions and Indicators

Dimensions	Derived	Variables Indicators
Housing Conditions	Dwelling type	$X_{i,1}^1 = \begin{cases} 1, se\ casa\ própria \\ 0, se\ outros \end{cases}$
	Wall Material	$X_{i,1}^2 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$
	Roofing material	$X_{i,1}^3 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$
	Piped water	$X_{i,1}^4 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$

	Provenance of the tap water used in the household	$X_{i,1}^5 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$
		$X_{i,1}^6 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$
Health	Lighting	$X_{i,2}^1 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$
	Sanitary sewer	$X_{i,2}^2 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Bathroom in the home	$X_{i,2}^3 = \begin{cases} 1, se\ adequado \\ 0, se\ não \end{cases}$
Access to Durable Goods	Destination of garbage	$X_{i,3}^1 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Stove	$X_{i,3}^2 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Refrigerator	$X_{i,3}^3 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Cell phone	$X_{i,3}^4 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
Communication and Information	Television	$X_{i,4}^1 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Computer	$X_{i,4}^2 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
Education	Internet	$X_{i,5}^1 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Adult Literacy	$X_{i,5}^2 = \begin{cases} 1, se\ tiver\ de\ 1^a\ a\ 4^a\ série \\ 0, se\ não \end{cases}$
	Incomplete Primary Education (1st to 4th grade)	$X_{i,5}^3 = \begin{cases} 1, se\ tiver\ até\ a\ 8^a\ série \\ 0, se\ não \end{cases}$
	Elementary School complete	$X_{i,5}^4 = \begin{cases} 1, se\ tiver\ acima\ de\ 15\ anos \\ de\ estudo\ na\ idade\ adequada \\ 0, se\ não \end{cases}$
	(up to 8th grade)	$X_{i,6}^1 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
Work	High School Complete	$X_{i,6}^1 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Higher Education	$X_{i,6}^2 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Employee with a work permit	$X_{i,6}^3 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Civil Servant	$X_{i,6}^4 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Other jobs without employee card	$X_{i,6}^5 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Domestic work with portfolio	$X_{i,6}^6 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Domestic work without portfolio	$X_{i,6}^7 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Self-employment	$X_{i,6}^8 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$
	Own work for personal consumption	$X_{i,6}^9 = \begin{cases} 1, se\ sim \\ 0, se\ não \end{cases}$

Fonte: Elaboração própria a partir dos dados da PNADs.

In dimension 1: Housing conditions, the following variables were applied in its observation: type of housing, wall material, roof material, piped water, source of piped

water, and lighting. Even though these variables can be discussed according to their importance in the evaluation of poverty, it is understood that the lack of appropriate housing conditions consists in a kind of relevant deprivation, besides being characterized as a contravention to the social rights assured by the Brazilian constitution.

Dimension 2: Health. In this perspective, proxies will be used to study it, considering that there are no singular elements that make it possible to present data related to this dimension, namely: sanitary sewage, bathroom at home, and garbage destination. What motivated this preference was the fact that the lack of access or the improper access to any of these elements can generate serious problems to human health, especially when it comes to basic health.

Dimension 3: Access to durable goods. The variables studied in this dimension were stove, refrigerator, cell phone, and television. This dimension is important because it means the minimum access to some basic goods.

Dimension 4: Communication and information are also included in the study. Those who do not have the means to communicate in contemporary society are considered to be deprived. The variables analyzed are: internet and computer.

Another important aspect of the research portrayed in this section is dimension 5: In this, Education, demonstrates an innovation for measuring multifaceted poverty in Ceará. This takes into account the Law of Directives and Bases of Education (Law 9.394/1996), in which the directives and bases of national education are determined, stating that there is a minimum level of schooling assigned for each specific age.

Following this line, for the resident whose level of schooling is higher than the one charged for his or her age group, it is weighted non-private, as opposed to private. Taking into consideration also people 18 years of age or older who do not have the amount of years of study attaining the completion of high school, being seen as deprived with respect
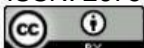
to years of schooling and not having the ability to get a decent job without having completed high school, would thus be weighted as private.

In this way, the perspective of education is fragmented into 5 variables studied, regarding the appropriate age with respect to each schooling stage: adult literacy, incomplete and finished elementary school, finished high school, and higher education. In these specified spheres, the number of minimum years of study required to complete the educational stages was considered. By introducing this element into the index, the goal was to absorb not only the average year of study per person, but also the "educational context" in which this individual is embedded.

And finally, dimension 6: Work, has nine variables: employee with a signed work contract, civil servant, other jobs without a signed work contract, domestic work with and without a work contract, self-employed, own work for personal consumption, work in construction for own use, and unpaid work.

4. Results and Discussion

At first, the results of deprivation levels in each of the specific dimensions are analyzed over the years 2005, 2009 and 2015. Subsequently, multidimensional poverty is studied across Ceará, the Northeast and Brazil.

4.1 Dimension 1: Housing Conditions

In order to measure homelessness, six indicators are taken into consideration. In Table 4, the percentage of the population that has housing deprivation is presented. It was verified a very inconstant variation during the years evaluated regarding the type of housing in Ceará. Thus, there was a growth in the deprivation index, which in 2005 was 55.9%, surpassing to 56.8% in the year 2015.

Analyzing at the Northeast level, it is noted that there has also been an increase in the degree of deprivation with regard to housing. In 2005, it was 52.7% and increased to 57.4% in 2015.

At the national level (Brazil), it can be seen that deprivation also increased, from 55.5% in 2005 to 59.4% in 2015.

Table 4: : Deprivation Index of the dimensions at the level of Ceará, Northeast and Brazil in the years 2005, 2009 and 2015 (%)

Dimensions	BR					
	2005		2009		2015	
	1	0	1	0	1	0
Housing Conditions	44,5	55,5	42,8	57,2	40,6	59,4
Health	18,0	82,0	17,8	82,2	17,6	82,4
Access to Durable Goods	28,8	71,2	29,8	70,2	29,5	70,5
Communication and Information	2,6	97,4	5,0	95,0	8,3	91,7
Education	2,3	97,7	0,9	99,1	0,6	99,4
Work	3,8	96,2	3,7	96,3	3,4	96,6
Dimensions	NE					
	2005		2009		2015	
	1	0	1	0	1	0
Housing Conditions	47,3	52,7	33,9	66,1	42,6	57,4
Health	16,7	83,3	12,5	87,5	16,2	83,8
Access to Durable Goods	27,8	72,2	22,5	77,5	30,2	69,8
Communication and Information	1,5	98,5	2,5	97,5	7,0	93,0
Education	2,6	97,4	0,8	99,2	0,7	99,3
Work	4,0	96,0	27,8	72,2	3,3	96,7
Dimensions	CE					
	2005		2009		2015	
	1	0	1	0	1	0
Housing Conditions	44,1	55,9	45,3	54,7	43,2	56,8
Health	17,5	82,5	16,9	83,1	16,2	83,8
Access to Durable Goods	29,8	70,2	30,0	70,0	30,2	69,8
Communication and Information	1,5	98,5	3,0	97,0	6,5	93,5
Education	2,8	97,2	1,0	99,0	0,7	99,3
Work	4,2	95,8	3,8	96,2	3,2	96,8

Fonte: Elaboração própria a partir dos dados da PNAD.

4.2. Dimension 2: Health

Observing this perspective, the basic sanitation situations were employed as a proxy to evaluate the health dimension. The lack of access, or inadequate access, to any of these sanitation factors is capable of causing serious problems to the health of human beings, especially with regard to basic health.

Table 4 shows that in the state of Ceará, regarding the Health dimension, there was an increase in deprivation, from 82.5% in 2005 to 83.8% in 2015, that is, an increase of 1.3% in the period investigated.

In relation to the Northeast region, there was a small increase in the deprivation index in this dimension. In 2005, it was 83.3%, rising to 83.8% in 2015. Regarding Brazil, there is an increase in the level of deprivation, which in 2005 was 82% and in 2015 was 82.4%.

### 4.3. Dimension 3: Access to Durable Goods

The dimension access to durable goods takes into account four variables, namely: stove, refrigerator, cell phone and television. In this dimension, it is observed that there was a small reduction in the deprivation index in Ceará, from 70.02% in 2005 to 69.8% in 2015 (Table 4).

Regarding the Northeast, it can be seen that there was also a small decrease in deprivation in this dimension. In 2005, it was 72.2%, falling to 69.8% in 2015.

In Brazil, the situation was the same as in Ceará and in the Northeast. The deprivation index decreased from 71.2% in 2005 to 70.5% in 2015..

4.4 Dimension 4: Communication and Information

In the realm of communication and information, deprivation is measured by two variables related to the household level, which are: the use of computers and access to the Internet.
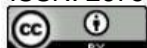
It is important to point out that most of these accesses to information do not suggest real deprivation, nor do they expose anything about the quality of the information obtained by the households. The need for a more complete and comprehensive analysis of these parameters is recognized, but this is beyond the purpose of this research.

Table 4 shows that between 2005 and 2015 in the state of Ceará, there was a reduction in deprivation from 98.5% to 93.5%.

In the Northeast region, there was a decrease in the level of deprivation from 98.5% in 2005 to 93% in 2015. As for the deprivation index in Brazil, it was observed that there was a considerable reduction from 97.4% in 2005 to 91.7% in 2015..

4.5. Dimension 5: Education

The highest indices of deprivation are condensed in the education dimension. This happens precisely because the study considers the adoption of the Law of Directives and Bases of Education (Law 9.394/1996), which determines the guidelines and bases of Brazilian education.

Regarding incomplete elementary school, children aged between 6 and 10 years old must have 4 to 9 years of schooling in order not to be classified as deprived. As for completed elementary school, these would be children between the ages of 11 and 14 who have finished elementary school between 8 and 14 years of study.

Young people over the age of 18, who need to have at least 15 years of schooling in order to have a good level of education and be competent to enter the job market, as well as not to be classified as lacking education, are concentrated in completed high school.

From the perspective of education, an increase in the level of deprivation is observed in Ceará: in the year 2005 it was 97.2%, traveling to 99.3% in 2015 (Table 4).

Following in the same vein, the Northeast also shows an increase from 97.4% in the year 2005 transitioning to 99.3% in 2015. When it comes to Brazil, it can be seen that
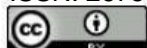
there was also an increase in the deprivation index, going from 97.7% in 2005 to 99.4% in 2015 (Table 4).

4.6. Dimension 6: Work

Work deprivation is measured by nine variables: employee with a labor card, civil servant, other jobs without a labor card, domestic work with a labor card, domestic work without a labor card, self-employment, own work for personal consumption, work in construction for own use, and unpaid work.

Table 4 shows the incidence of deprivation for this dimension at the level of Ceará, Northeast and Brazil. In Ceará, the deprivation index increased from 95.8% in 2005 to 96.8% in 2015.

Regarding the Northeast region, it was possible to verify that there was a small increase in deprivation in this dimension: in 2005 it was 96.0% and rose to 96.7% in 2015. In Brazil, there was also a slight increase from 96.2% in 2005 to 96.6% in 2015 (Table 4).).

4.7. Multidimensional Poverty

In general, the data from PNAD show that the living conditions of the population of Ceará worsened during the years 2005 to 2015.

Table 5 presents poverty in its multiple dimensions in the state of Ceará from 2005 to 2015. The findings indicate a growth in the level of multidimensional poverty in the state: from 38.33% in 2005 to 44.15% in 2015, according to the methodology applied, obtaining a variation of 5.82%.

Table 5 also shows the level of multidimensional poverty in the Northeast and Brazil. It is possible to verify that in the Northeast region there was also an increase in multidimensional poverty, going from 37.84% in 2005 to 44.03% in 2015.

In relation to Brazil, it is noted once again an increase in the degree of multidimensional poverty, in which, in 2005, the rate was 40.40% and exceeded 45.38% in 2015.

Table 5: Multidimensional Poverty at Ceará, Northeast and Brazil levels, 2005, 2009 and 2015 (%)

IPM	2005	2009	2015
CE	38,33	41,76	44,15
NE	37,84	40,82	44,03
BR	40,40	42,87	45,38

Fonte: Elaboração própria a partir dos dados da PNAD.

Thus, it is possible to see that the growth of multiple-dimensional poverty in the state of Ceará was somewhat higher than in the Northeast region.

5 Final considerations

For a long time, poverty was defined only in accordance with monetary insufficiency, but its concept has evolved, and it is now seen as a phenomenon with several dimensions that need to be included and analyzed, being related not only to economic factors, but also to other variables in the scope of deprivations in the social, cultural, and political spheres, such as, for example, health conditions, the individual's level of education, housing, sanitation, and introduction into the labor market. Thus, the current change from the unidimensional perspective to a multidimensional approach to poverty is configured as one of the most relevant evolutions in this field.

Considering that the Northeastern region of Brazil, especially the state of Ceará, has a lower level of development and still has high levels of poverty and inequality, one can see how important this multidimensional approach to poverty is for the region, since it is recognized as being more complete and considers dimensions related to the quality of life of individuals. Following this line, the understanding of these indicators makes it feasible to propose and build better elaborated and planned public policies to face this problem.

In this sense, it is necessary to highlight the role of the State in the process of intervention in the social area, as well as in the elaboration of public policies that seek to confront and combat poverty. Taking into account that the State is considered the regulator of the social area, and that, by means of effective public policies, it can meet the longings and various demands of society, as well as bring about the reduction of inequality and poverty rates, generated by socioeconomic development and by the capitalist system in force, thus seeking to develop actions for the social and disadvantaged strata.

Attentive to the measurement of multidimensional poverty in Ceará from the perspective of the six dimensions analyzed, it was detected that multidimensional poverty denoted an increasing trajectory over the years studied. It was observed that there was an increase from 38.33% in 2005 to 44.15% in 2015, according to the methodology applied, pointing to a variation of 5.82%, as well as an increase in the levels of deprivation in the dimensions evaluated.

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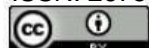
In view of the above, it can be concluded that the greater incidence of social programs offered by the government only softened the social picture in the Northeast, particularly in Ceará, but did not, in fact, overcome the problem of poverty.

Thus, it can be deduced that in order for a reduction in multidimensional poverty to occur, it is necessary to adopt public policies aimed specifically at the dimensions that have the greatest impact on poverty, which are: education, work, communication and information, and health.

Thus, the hope of this study is to understand how these variables are present in the definition of poverty in Ceará and, based on this, to collaborate in the orientation and direction of better elaborated and effective public policies, with the intention of decimating the adverse effects of this problem that is still so present in our society.

References

ALVES, C. C.; VILELA, T. A. S.; RODRIGUES, E. P. A Responsabilidade do Estado enquanto provedor de Políticas Públicas e o Serviço Social: aspectos polêmicos. In: **III Simpósio Mineiro de Assistentes Sociais.** Belo Horizonte, 2013.

BARBIERI, J. A.; RIBEIRO, D. M. A intervenção do Estado na economia e o comprometimento com desenvolvimento humano através da promoção de Políticas Sociais. IN: **XXI Congresso Nacional Conselho Nacional em Pesquisa e Pós-Graduação em Direito - CONPEDI,** Santa Catarina, 2012.

BARROS, R. P. de; HENRIQUE, R. MENDONÇA, R. Desigualdade e Pobreza no Brasil: retrato de uma estabilidade inaceitável. **Revista Brasileira de Ciências Sociais**. v. 15, n. 42, 2000.

CALDAS, R. M.; SAMPAIO, Y. S. B. Pobreza no Nordeste brasileiro: Uma análise multidimensional. **REC - Revista Economia Contemporânea**. Rio de Janeiro, v. 19, n. 1, p. 74-96, 2015.

CHAUI, M. **Convite à Filosofia**. São Paulo: Ática, 2009.

COUTO, B. R. O. **Direito Social e a Assistência Social na sociedade brasileira**: uma equação possível? 2. ed. São Paulo: Cortez, 2006.

CURRALERO, C. R. B. **O enfrentamento da pobreza como desafio para as políticas sociais no Brasil: uma análise a partir do Programa Bolsa Família.** Tese (Doutorado) – Universidade Estadual de Campinas, Instituto de Economia. Campinas, SP, 2012.

DALLAGO, C. S. T. Estado e Políticas Sociais no Brasil: formas históricas de enfrentamento a pobreza. In: **III Jornada Internacional de Políticas Púlicas.** São Luís – MA, 28 a 30 de agosto 2007.

ESPÍNOLA, G. M.; ZIMMERMANN, C. R. Definição e mensuração da Pobreza: algumas considerações sobre o debate recente. In: **Congresso Internacional Interdisciplinar em Sociais e Humanidades.** Niterói RJ: ANINTER-SH/ PPGSD-UFF, 03 a 06 de setembro de 2012.

FALVO, J. F. **A desigualdade social no Nordeste metropolitano: análise do período de 1981 a 2008.** Tese (Doutorado), Universidade Estadual de Campinas, Instituto de Economia. Campinas, SP, 2010.

FRIEDE, R. **Ciência política e teoria geral do Estado**. 2. Ed. Rio de Janeiro: Forense Universitária, 2007.

FRONZA, P. **Programa Bolsa Família: contribuições para o enfrentamento à pobreza.** Tese (Mestrado), Pontifícia Universidade Católica do Rio Grande do Sul, Programa de Pós-Graduação em Serviço Social. Porto Alegre, 2010.

IBGE. **Instituto Brasileiro de Geografia e Estatística.** Disponível em: http://www.ibge.gov.br/home/estatistica/populacao/trabalhoerendimento/pnad2015/micro dados.htlm. Acesso em 02 de maio de 2017.

IPEA. **Instituto de Pesquisa Econômica Aplicada.** Disponível em: http://www.ipeadata.gov.br. Acesso em: 20 junho 2016.

MEDEIROS, C. N. de.; NETO, V. R. P. **Análise espacial da Extrema Pobreza no estado do Ceará.** Instituto de Pesquisas e Estratégias do Ceará: IPECE, Fortaleza, 2011.

MENDONÇA, K. V.; CAMPOS, R. T.; LIMA, P. V. P. S.; BATISTA, P. C. de S. Análise das Causas Socioeconômicas da Pobreza Rural no Ceará. **Documentos técnico-científicos**. v. 41, n. 3, Fortaleza, 2010.

OLIVEIRA, A. J. P. de. **Estudos Estados Brasileiros. Ceará 200-2013.** São Paulo: Editora Fundação Perseu Abramo, 2014.

PONTES, H. A. de Q. **Pobreza No Estado Do Ceará Urbano:** Uma Análise Multidimensional (2006-2013). Dissertação (mestrado profissional) – Programa de Pós-Graduação em Economia, CAEN, Universidade Federal do Ceará, Fortaleza, 2015.

QUEIROZ, S. N.; REMY, M. A. P. A.; PEREIRA, J. M. P. D. Estudo comparativo entre o Programa Bolsa Família no Brasil e o Programa Oportunidades no México. Bahia **Análise & Dados**, v. 21, p. 681-699, 2011.

27
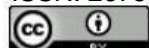
REGO, W. L.; PINZANI, A. **Vozes do Bolsa Família:** autonomia, dinheiro e cidadania. São Paulo: Editora Unesp, 2013.

RELATÓRIO NACIONAL DE ACOMPANHAMENTO. **Objetivos de desenvolvimento do milênio**. Coordenação: Instituto de Pesquisa Econômica Aplicada (IPEA) e Secretaria de Planejamento e Investimentos Estratégicos (SPI/MP); supervisão: Grupo Técnico para o acompanhamento dos ODM. - Brasília: Ipea: MP, SPI, 2014. 208 p.

RIBEIRO, S. C. **Caracterização da pobreza no território de Identidade de Vitória da Conquista em 2010:** um estudo a partir da abordagem das necessidades básicas e da abordagem das capacitações. In: **II Semana da Economia.** Bahia, 2011.

SANTANA, E. M. J. **A pobreza no Brasil na década de 2000:** políticas e resultados. Monografia (Trabalho de Conclusão de Curso) -Graduação em Economia, Universidade Federal da Bahia, Salvador, 2012.

SANTOS, E. I. dos.; CARVALHO, Í. C. S. de.; BARRETO, R. C. Sá. Análise espacial da Pobreza no Nordeste brasileiro: uma aplicação do IMP. In: **XI ENCONTRO DE ECONOMIA BAIANA**. Bahia, 2015.

SCHEEFFER, F. O papel das políticas públicas: uma questão controversa. In: VIII Encontro de Economia Catarinense, 2014, Rio do Sul. A**nais dos resumos do VIII Encontro de Economia Catarinense,** v. 1, p. 49-50, 2014.

SEN, A. **Desenvolvimento como liberdade.** Tradução Laura Teixeira Mota; revisão técnica Ricardo Doninelle Mendes. São Paulo: Companhia das Letras, 2010.

SILVA, A. F.; ARAUJO, J. A.; CAMPELO, G. L.; VASCONCELOS, J. C. **Uma análise da Pobreza Multidimensional no Ceará no período 2006 a 2012.** 1º lugar com artigo, Instituto de Pesquisa e Estratégia Econômica do Ceará - IPECE, Fortaleza, 2014.

SILVA, C. F. da; SOUSA JUNIOR, A. S. de. Pobreza e Desigualdade no Brasil: uma análise da contradição capitalista. In: **VII Congresso Português de Sociologia**. Universidade do Porto - Faculdade de Letras – Faculdade de Psicologia e Ciência da Educação, 2012.

SILVA, E. D. **Pobreza absoluta e classes sociais no Brasil:** o saldo do período de estagnação econômica, 1981-2003: uma abordagem sócio-ocupacional. Dissertação (Mestrado), Universidade Estadual de Campinas. Instituto de Economia. Campinas, SP: [s.n.], 2005.

SOARES, S.; SOUZA, L. de.; SILVA, W. SILVEIRA, F. G.; CAMPOS, A. Perfil da Pobreza: Norte e Nordeste rurais. **Estratégia do FIDA para o Brasil 2016-2021 e Série**

de Estudos sobre a Pobreza Rural. Centro Internacional de Políticas para o Crescimento Inclusivo (IPC-IG), Programa das Nações Unidas para o Desenvolvimento (PNUD), Instituto de Pesquisa Econômica Aplicada (Ipea) e o Fundo Internacional de Desenvolvimento Agrícola (FIDA). Brasília, 2016.

WERTHEIN, J. NOLETO, M. J. Pobreza e desigualdade no Brasil: traçando caminhos para a inclusão social. **Anais do Seminário Internacional Pobreza e Desigualdade no Brasil**, Brasília, 2003. ISBN: 85-87853-96. Brasília: UNESCO, 2003.

WLODARSKI, R.; CUNHA, L. A. Desigualdade Social e Pobreza como consequências do Desenvolvimento da sociedade. In: **IX Simpósio Internacional Processo Civilizador.** Paraná, 2005.

VALE, T. M. C. do.; FELIPE, J. L. A.; FORMIGA, M. C. C.; RAMOS, P. C. F. Redução da pobreza e transferências governamentais: um estudo de caso para o estado Rio Grande do Norte na região Nordeste brasileira. In: **XVII Encontro Nacional de Estudos Populacionais**, ABEP. Caxambu- MG – Brasil, 2010.

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30