

Increased vulnerability of family farming in the context of a weakened FNS agenda due to austerity measures in Brazil

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ABSTRACT: SDG goals of ending poverty and achieving Zero Hunger must address the nexus of a transformational shift in the Food and Nutrition Security (FNS) Agenda, integrating more sustainable food systems, territorial development, sustainable infrastructure, fiscal and economic elements to robust social protection schemes. By considering Family Farming government expenditure budget, the slowing and stalled economic growth, and political and fiscal policy developments. We discuss Brazil's high-level government budgetary interventions, the governance and institutional contexts affecting food security as indicators of how aggressive budgetary and institutional measures have negatively impacted the nation's social protection policy environment, resilience, and sustainable development perspectives.

El aumento de la vulnerabilidad de la agricultura familiar en el contexto de una agenda de seguridad alimentaria debilitada por medidas de austeridad en Brasil

RESUMEN: Los ODS de reducir la pobreza y lograr el Hambre Cero deben abordar un cambio transformador en la Agenda de Seguridad Alimentaria y Nutricional (SAN), integrando sistemas alimentarios más sostenibles, elementos fiscales y económicos a esquemas sólidos de protección social. Al considerar el presupuesto de gastos del gobierno de la Agricultura Familiar, la desaceleración y el estancamiento del crecimiento económico y la política fiscal en Brasil. Discutimos intervenciones y contextos institucionales y presupuestarios agresivos que han impactado negativamente el entorno de las políticas de protección social y desarrollo sostenible afectando la resiliencia y las perspectivas de la seguridad alimentaria.

KEY WORDS/ PALABRAS CLAVE: Fiscal and institutional measures. Food and nutrition security agenda. Governance. Regional development planning and policy. Social impacts and social resilience / Agenda de seguridad alimentaria and nutricional, Gobernanza, Impactos sociales and resiliencia social, Medidas fiscales and institucionales, Planificación and políticas de desarrollo regional.

JEL classification/ Clasificación JEL: R58, D60, E62, H5, H6.

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1. Introduction

Guaranteeing food security has always been an uppermost priority for democratic governments, public organizations, and societies in general (Santana & Nascimento, 2012; Tomlinson, 2013). In Brazil, family farming has begun to occupy a larger space within policymaking circles in the 1990s. Since then, Brazil had outperformed many countries in investments in health and social policies (Souza *et al.*, 2019). Political choices that gained traction in 2003, with the implementation of the Zero Hunger Program, combined with the launch of the IYFF campaign in 2008 to the post-IYFF 2014 celebration as well as the Sustainable Development Goals (SDGs) (Bateman *et al.*, 2013; MacLennan, 2015; UNDESA, 2015; Santos & Vieira, 2018). However, recent policy developments in Brazil have further increased the political, sectoral, and public concerns about poverty and food insecurity. The recent local political-economic instability deepened dire consequences of the 2008 global crisis, putting additional pressure on society, the environment, and food systems as well as working in tandem as drivers of poverty and threats to Human Rights (UN, 1948; OHCHR, 1966; Santana & Nascimento, 2012; Bateman *et al.*, 2013; Mpofu, 2015; Santos & Vieira, 2018; Santarelli *et al.*, 2018; Levitsky & Ziblatt, 2018; Souza *et al.*, 2019).

Although the literature reports successful efforts by the Brazilian government to eradicate extreme poverty through robust social programs, social vulnerability and the related problem of hunger remain issues (Santarelli *et al.*, 2018; Sabourin *et al.*, 2020). Reduction of Social Protection –as a consequence of austerity policies (Ortiz *et al.*, 2015); and, ongoing relevant negative socio-environmental impacts (Gross, 2018; Santos & Viera, 2018) –represent shreds of evidence that the decades-long prevalence of progressive policy implementation in Brazil is at risk and that social vulnerability and poverty levels are on the rise. Nationwide, the clear signals of social deterioration caused by the severe cut of social program safety nets have been causally related to intensifications in poverty, unemployment, rising inequality, and environmental degradation at different levels in Brazil’s communities (FGV, 2018). Against this background, while there has been considerable research into the consequences of austerity in Europe, there has been insufficient research of austerity within the sole South American context (Oosterlynck *et al.*, 2015; Souza *et al.*, 2019). In the Brazilian context, there has been significant spending cuts in federal budget programs since 2016, especially affecting the most vulnerable populations in the country (Souza *et al.*, 2019). It outlines an undeniable transition towards a new paradigm implicating the social protection agenda¹, territorial development, sustainable and inclusive investments, fiscal and economic factors, and robust social protection schemes (Oosterlynck *et al.*, 2015). The current scenario marked by rising rates of hunger and poverty creates shocks within the process of embodying the

¹ The actions and the actors in the food system can lead to outcomes such as food insecurity and might produce negative impacts on the environment, in terms of unsustainable production, transportation, processing, packaging, storage, retail, consumption, loss, and waste, as well as a complicated interaction with climate change. Acting as drivers of food insecurity through impacts on food availability, access, utilization, and stability – Chapter 5 (IPCC SRCCL, 2019).

SGDs² from the 2030 Development Agenda and related Paris Agreement targets into government fiscal planning. Such factors appear as crucial setbacks in a world unable to deliver on the quantity and quality of inclusive financing, investments, technology, and innovative political approaches needed (Tomlinson, 2013; IDB Group, 2019). It reinforces the transformational aspects of necessary shifts, highlighting the importance of fiscal and institutional measures as essential factors for supporting inclusive growth, productive processes, and climate-resilient pathways (Sumner, 2017; Ferreira Costa, 2020a; Kim *et al.*, 2020).

In this regard, the article's objective is to investigate the economic and fiscal austerity trends and implications on Brazil's family farming sector. The paper considers the slowing and stalled economic growth and political and fiscal downturns that have played a massive role in recent food security and nutrition trends in the country. We assess budgetary data from the Special Secretariat for Family Agriculture and Agrarian Development of Brazil³ (SEAD*; for its acronym in Portuguese). Furthermore, we seek to discuss government fiscal interventions and institutional measures as essential tools to influence Adaptive Social Protection and Social Risk Management efforts in highly vulnerable settings synergistically.

2. Methodological approach

The study covers the period after the consolidation of the 2008 crisis, explicitly drawing on government fiscal and institutional measures put in place since 2016, to explore the parallels between public policy instruments and agricultural and environmental management mechanisms for smallholder farmers in Brazil, until the first year of the newly far-right elected central government (2019). The likely effects are assessed by analyzing the change in federal expenditure –in nominal Brazilian Reais–, committed to family farming in the federal budgets from 2017 to 2019, according to the 2016-2019 Pluriannual Plan⁴ (PPA), which represents the planning of government actions for four years. Mentions to policy and budgetary developments, extrapolating this period, are made when deemed necessary. However, this analysis does not scrutinize specific government programs; it is focused on determining budgetary trends. Moreover, we limit the study temporally to capture ongoing policy developments without the fiscal impacts of the coronavirus crisis.

The paper presents secondary research and focuses on budgetary and policy developments that have impacted several means of implementation and partnerships

² The Sustainable Development Goals (SDG) framework incorporates two indicators for observing SDG Target 2.1: The predominance of undernourishment ([SDG Indicator 2.1.1](#)) and pervasiveness of moderate or severe food insecurity based on the Food Insecurity Experience Scale –FIES ([SDG Indicator 2.1.2](#)).

³ The SEAD was renamed Secretariat of Family Farming and Cooperativism and subordinated to the Ministry of Agriculture (Decree No. 9,667/2019). However, the budget government websites maintained the original name in its pages. Therefore, in this study, we decided to maintain the original name.

⁴ Law No. 13,249, of January 13, 2016, which institutes the Union's Pluriannual Plan for the period from 2016 to 2019. Amended by Law No. 13,588, of January 3, 2018, which modifies the Union's Pluriannual Plan for the period from 2016 to 2019; and, Ordinance No. 674, of December 30, 2019, which provides for the update of the 2016-2019 Pluriannual Plan.

for sustainable development countrywide, addressing issues related to the Brazilian Food and Nutrition Security (FNS) Agenda. Methodologically, the article adopts a qualitative descriptive approach presenting secondary research, relying on the method of data and text analysis to bring relevant information to the discussion, giving visibility to a broad range of socioeconomic and fiscal data, focusing on the effects of austerity measures in the levels of social protection among vulnerable populations in Brazil. This Qualitative research is included in the category case studies. Qualitative studies encourage improved academic and administrative practice, accommodating the study of complex policy-meaningful research questions that matter in the real world, underlying real intricacies that policymakers and public organizations face (Gilad, 2019). According to Patton (2014); Denzin & Lincoln (2017), qualitative research is multimethod in focus, comprising an interpretative, naturalistic method to its subject matter. Data for qualitative analysis commonly result from fieldwork and being multimethod in focus, three types of conclusions often result from this qualitative fieldwork experience: Interviews, observations, and documents. Therefore, public records and official government documents regarding crucial legislation and policies that apply to fiscal and institutional developments regarding food security and family farming are the two primary document types that substantiate outcomes-based evaluation and investigation in this research. In this regard, documents are a sonorous source of learning and contribute an excellent inception point for any further assessment research (Bresciani *et al.*, 2009). Consequently, the authenticity of the documents used was determined before using them for the assessment (Upcraft & Schuh, 1996; Patton, 2014).

Furthermore, since qualitative methodology explores a particular description of circumstances, events, people, interactions, and examined behaviors (Upcraft & Schuh, 1996). Our approach analyzes weakened economic, fiscal, and institutional perspectives through the lens of the raising vulnerability of family farming in Brazil, examining increased poverty levels in the period, and inferring damages to the food and nutrition status in the nation, suggesting plausibly relationships among variables related to budgetary data from 2016 to 2019. We hypothesize that family farming policies can be designed to support Adaptive Social Protection and Social Risk Management efforts synergistically based on budget expenditure committed to this outcome. It is centered on knowing how actors make sense of involvement in their circumstances (Bresciani *et al.*, 2009; Patton, 2014). The conceptual framework of this research builds its narrative around the family farming social protection context, and growing concerns over austerity measures impacting food security and poverty levels in Brazil. We centered on the fiscal austerity issue, with an interdisciplinary perspective that reviews budgetary, fiscal, and institutional measures related to the food security policy environment in the period, as mentioned above.

Equally to quantitative studies, precision, and uprightness of the logic on examination and describing standards of qualitative research practice is attainable (Ospina *et al.*, 2017). In this regard, we presented a brief review of political and fiscal policy development that has played a massive role in recent food security and nutrition trends in the country; and, gathered family farming budgetary data made publicly available on the SIGA Brasil Platform (Citizen Panel) –until May 19, 2020 to avoid capture the impacts of COVID-19 crisis–, by the Federal Senate of Brazil

(2020) to map the annual evolution of government nominal expenses in Brazilian Reals (R\$ or BRL), against the following budget criteria: Planned; Committed; Executed; Paid out; and, Locked (Frozen). The application of both techniques themselves can yield very rich findings for outcome-based appraisals, letting the methodology determine whether an intended outcome has been distinguished (Bresciani *et al.*, 2009).

To give a broad understanding of the context assessed, we analyzed data from the IBGE, the IPEA, and scientific literature to explore the interdependence of the adverse effects of decreased public spending on family farming social protection to ensure evidence-based information. We analyzed the political and fiscal policy developments to demonstrate emerging food and nutrition insecurity trends. Therefore, raising vulnerability is described in terms of policy development. Overall, the paper attempts to contribute the discussion of impacts of austerity within the unique Brazilian context where significant spending cuts in federal budget programs have occurred since 2016, targeting more vulnerable populations (Souza *et al.*, 2019). It seeks to bridge current global discussions on governance, fiscal, and institutional contexts of the FNS Agenda as an enabler of policy environments that could facilitate uptake of accelerated adoption of improved fiscal and political choices, including recognition of a power/rights imbalance concerning legal, economic, political, and social instability as drivers of weakened family farming settings and food security policies.

3. Fiscal and institutional measures in the family farming sector

According to the 2017 Brazilian Agricultural Census, Brazil has 15.1 million people employed in agricultural establishments⁵. About 77 % of the establishments were classified as family farming⁶ and were responsible for 23 % of the production value, occupying 23 % of the total area of agricultural establishments (Map 1). About 10.1 million people worked in family agriculture or 67 % of the workforce in agricultural establishments. However, in family farming establishments, the

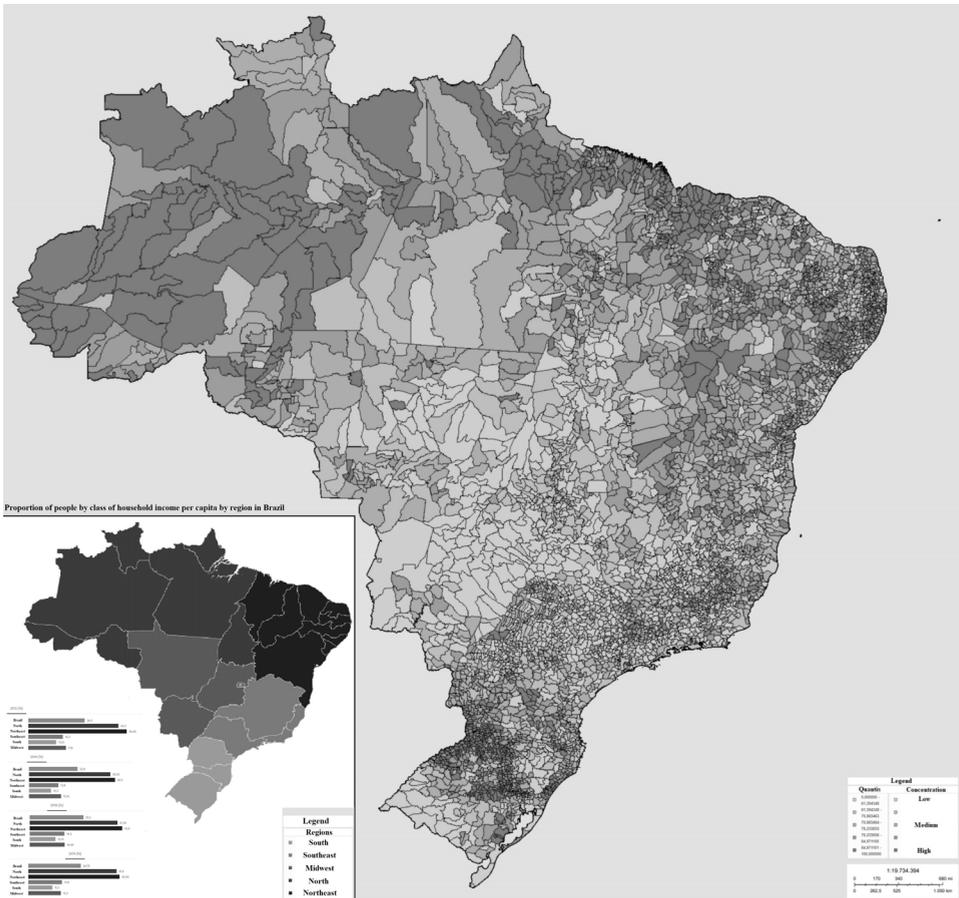
⁵ The term “Agricultural Establishments” refers to a formal nomenclature officially used by IBGE, which includes “farms”, but is not limited to it. Officially, the term describes the whole range of agricultural activities developed in rural productive establishments, covering characteristics of the producer and the establishment, economy, and employment in rural areas: Livestock, farming, and agribusiness. It is a sort of “collection unit” or “productive unit” dedicated, totally or partially, to agricultural, forestry or aquaculture activities, subordinated to a single administration (producer or administrator), regardless of its size, legal form, or location, with its production for subsistence or for sale (IBGE, 2017).

⁶ A legal definition of family farming consists of Decree No. 9,064, of May 31, 2017. Moreover, under the Brazilian law, family farming is an economic activity provided for in Law No. 11,326/2004. According to the law, family farmers and rural family entrepreneurs are those who practice activities in rural areas, have an area of up to four fiscal modules – the size of a fiscal module varies according to the municipality where the property is located. The value of the fiscal module in Brazil ranges from 5 to 110 hectares –, family labor, minimum percentage of family income from economic activities in their establishment and management of the establishment or enterprise by the family itself. The family farming segment is made up of agrarian reform settlers, beneficiaries of the National Land Credit Program (PNCF), quilombolas, indigenous people, artisans, artisanal fishermen, aquaculturists, mariculturists, fish farmers, foresters, extractivists, among others. The identification of family farming, for the purpose of access to public policies, occurs by obtaining the Declaration of Aptitude to PRONAF (DAP). In possession of DAP, the family farmer proves his insertion in the rural environment, with the descriptive declaration of the property and/or its economic activities. For the purposes of this study, “smallholders” are understood the same as family farmers.

employed population decreased by 2.166 million small farmers in the last decade, which may indicate a complex and dynamic internal migration system (Baptista *et al.*, 2018). Moreover, the Brazilian Agricultural Census (2017) indicates the ethnicity/race of smallholder farmers as it follows: 52.8 % of them were dark skin –black (8.4 %), brown (44.5 %) –, and 45.4 % were white; yellow 0.6 %; and, indigenous people 1.1 %, corresponding to the findings in the National Household Sample Survey (IBGE, 2019a; 2019b). The participation of women and the elderly aged 65 and over in the direction of establishments increased 18.7 % and 23.2 %, from 12.7 %, and 17.5 %, respectively (IBGE, 2006; 2017).

MAP 1

**Proportion of family farming by municipality in Brazil (a).
In detail, the poverty's rates dynamics in Brazil, between 2011-19 (b)**



Source: Adapted from: (a) IBGE (2017) –<https://mapasinterativos.ibge.gov.br/agrocompara/>; (b) IBGE, 2020b.

It is worth mentioning that Smallholder farmers, along with traditional populations, are mainly composed of masses that have been consistently attacked by far-right political forces in Brazil. Such attacks are impersonated in presidential speeches (Made by Bolsonaro), which accuse them of blocking economic development activities and colluding with foreign actors at the expense of national sovereignty (Sauer *et al.*, 2019), even though rural populations remain vulnerable to food and nutritional deficits and their associated socioeconomic determinants (Almeida *et al.*, 2017; Trivellato *et al.*, 2019).

3.1. The food and nutrition security (FNS) versus the fiscal agenda in Brazil: A dynamic process

In previous years, Brazil had significantly reduced hunger and malnutrition⁷ (FAO/FIDA/PMA, 2014; MDA, 2014). Advances in fighting hunger and poverty stemmed from a renewed Food and Nutrition Security (FNS) Agenda⁸ developed from 2003 onwards, with the launch of the Zero Hunger Program⁹. Further, reinforced with the launch of the “Brasil Sem Miséria” Plan¹⁰ in 2011, and the recreation¹¹ of the National Council for Food and Nutrition Security¹² (Consea, in Portuguese) –institutionalizing the FNS Agenda nationwide by implementing social protection policies and family farming agricultural production articulated with market components and the protection of the environment. The Government’s Food and Nutrition Security Agenda has been anchored in a sophisticated front of actions, encompassing various public management instruments and social participation (IPEA, 2014). The Constitution of the Food Security and Nutrition System (Sisan),

⁷ The Malnutrition Prevalence Indicator of FAO, scales, and monitors hunger at the international level. Below 5%, the statistical limit of the measure, a country is considered to have exceeded the problem of hunger. In South America, only Brazil and Uruguay have reached this level to date (FAO/FIDA/PMA, 2014).

⁸ See more at IPEA: “The Historical Path of the National Food and Nutrition Safety Policy Agenda: Projects, Discontinuities, and Consolidation,” (2014).

⁹ One of the pillars of the Zero Hunger Program was the Food Acquisition Program (PAA), which helped to reduce extreme poverty considerably in Brazil, from 12% to 4.8% in only six years. Based on the strategy of expanding family farming and distribute food to entities specializing in caring for children, the elderly, and people in vulnerable situations.

¹⁰ The plan had the ambitious goal of overcoming extreme poverty by the end of 2014, targeting families living with a family income of less than R\$70 person/month. In four years, BSM’s actions removed 22 million people from a situation of extreme poverty. Three pillars were fundamental to the plan (MDS, 2015): Income guarantee for immediate relief from extreme poverty; Access to public services aimed at improving the conditions of education, health, and citizenship of families; and, Productive inclusion, to increase skills and job opportunities and income generation among the most impoverished rural and urban families.

¹¹ The National Council for Food Security and Nutrition (Consea) was created in 1993, by ex-President Mr. Itamar Franco government; and, closed in 1995, by ex-President Fernando Henrique Cardoso; followed by the creation of the Solidarity Community Program (Programa Comunidade Solidária, in Portuguese). The Consea was recreated in 2003, during the first term of ex-President Mr. Luiz Inácio Lula da Silva. Since its origins, it serves as an advisory body of the Republic’s Presidency on issues related to Food Security and Nutrition.

¹² Decree No. 807, of April 24, 1993. Repealed by Decree No. 1,366, of 1995; Repealed by Decree No. 9,906 of 2019; Regulated by Decree No. 9,906, of July 9, 2019, establishing the National Volunteering Incentive Program, and other measures.

which defined the operating rules of the Consea, highlighted Government efforts to support initiatives of such nature¹³.

Brazil was the first country to develop an institutional food acquisition program. It developed a guaranteed demand for food from family farming aligned to a food security strategy, backed on strong civil-society-led public campaign guided by the inclusion of the right to food in Brazil's Constitution (Federal Constitution, 1988; Santarelli *et al.*, 2018). The Food Acquisition Program (PAA) and the National School Feeding Program (PNAE) are the two most crucial institutional procurement programs in Brazil. The PAA operates through several modalities, including support for the management of reserves and stocks, milk production, and consumption (PAA Milk), and institutional purchases.

The PAA was launched in 2003¹⁴ as part of the Zero Hunger Program¹⁵, with two primary purposes: (i) promoting access to food; and, (ii) encouraging family farming. To guarantee that those who benefit from the PAA were the people most in need, the PAA gave priority access to family farmers enrolled in the Unique Registry of Participants of Brazil (CadÚnico¹⁶). Participants in the program of conditional transfers of income "Bolsa Família" expanded rapidly from a cost of US\$ 50.2 million to serve 41,500 family farmers in 2003, to serve 185,500 family farmers at the cost of US\$ 410,300,000 in 2012, reaching US\$ 620,000,000 in 2019 (original data in US\$) (MDS, 2014; 2015). In the Framework of the "Bolsa Família," after ten years of operation, the PAA bought more than three million tons of food from more than 200,000 family farms. In terms of spending, the program only represented approximately 0.0004 percent of the country's GDP (IPC-IG, 2016).

In June 2009, Federal Law No. 11,947, established that at least 30 % of the budgetary allocations approved for the States, Municipalities, and the Federal District by the National Fund for the Development of Education for the implementation of the PNAE had to be used to buy food directly from family farming or their organizations. To reinforce the participation of family farmers in the program, producers had to obtain a declaration of eligibility (DAP) from the National Program for Strengthening Family Farming (PRONAF). Through the DAP, farmers' classification happened based on poverty, income, and vulnerability, which supported proper identification, stratification, and prioritization in access to the programs (Guanziroli & Basco 2010; Ferreira Costa, 2014). One of the milestones of the FNS Agenda development in the

¹³ The main space for civil society participation to discuss the topic at the federal level, articulating the Food Acquisition Program (PAA). It included innovations in the National School Feeding Program (Pnae), bringing together indigenous people, urban, peri-urban, and rural populations, traditional peoples, health representatives, rural production chains, family farmers, and all levels of the government.

¹⁴ Instituted by art. 19 of Law No. 10,696, of July 2, 2003, under the Zero Hunger Program. This Law was amended by Law No. 12,512, of October 14, 2011, later, regulated by various decrees, such as the Decree No. 7,775, of July 4, 2012, which is in effect at the date of the writing of this research.

¹⁵ Law No. 10,689, of June 13, 2003.

¹⁶ Decree No. 3,877, of July 24, 2001.

country was the promulgation of the Organic Law on Food Security and Nutrition¹⁷ (Losan), in 2006, regulated by Decree No. 7,272/2010 that defined the guidelines and objectives of the National Food Security and Nutrition Policy (PNSAN; for its acronym in Portuguese). The legal framework provided for the management, financing mechanisms, monitoring, and evaluation, within the National Food Security and Nutrition System (Sisan; for its acronym in Portuguese), and established the parameters for elaborating the National Food Security and Nutrition Agency. The Decree No. 7,272 of August 25, 2010, under Law No. 11,346 of September 15, 2006 (Losan), created the National Food and Nutrition Security System (Sisan), intending to ensure the Human Right to adequate food, and instituted the National Food and Nutrition Security Policy (PNSAN), which established the parameters for the elaboration of the National Food and Nutrition Security Plan (PLASAN), and related provisions. In this sense, the “Constitutional Amendment” No. 64 included food among social rights, established in Article 6 of the Federal Constitution of 1988. Since then, the “right” to adequate food became “Law” (translated years later into the undertrack National Regulatory Framework described above), and had become an important instrument, imposing responsibilities on the State for the design and implementation of policies and regulations intending to support the rights to adequate food of all citizens.

Under the Losan, the FNS Agenda’s governance structure foresaw –as central elements–, the National Conference on Food Security, the National Council for Food Security and Nutrition (Consea), and the Interministerial Chamber for Food Security and Nutrition (Caisan). They were accompanied by emblematic steps based on the incorporation of the Human Right to Adequate Food in the Federal Constitution¹⁸ in 2010, and, in 2011, by the institutionalization of the National Plan for Food Security and Nutrition¹⁹. The positive characteristics of this framework unfold from a lengthy discussion and elaboration in public, private, political, and academic spheres –having the federal government as a critical piece in the articulation and coordination of actions on the Human Right to adequate food, food sovereignty, food and nutrition security, and family farming in Brazil. Aimed at addressing each of these factors and relate them to social protection and its potential for food and nutrition security of the

¹⁷ Law No. 11,346, of September 15, 2006. The Law defined food security and nutrition nationally as “the realization of the right of all to legitimate and uninterrupted access to sufficient quality food without jeopardizing access to other essential needs based on health-promoting food practices,” addressing cultural diversity and environmentally, culturally, economically and socially sustainable.

¹⁸ The 1988 Federal Constitution (CF/1988) established the Brazilian State mission of guarantee human dignity and Human Rights to all Brazilians, by affirming in its Chapter II (“Of Social Rights”), art. 6, that social rights are education, health, work, leisure, security, social security, protection of motherhood and childhood, assistance to the helpless under this Constitution, and in its art. 7, the rights of urban and rural workers, as well as others, aimed at advancing their social status. The Constitutional Amendment (EC) No 64 Of February 2010, which amended Article 6 of FC/1988, introduced a view of ensuring the Human Right to Adequate Food, per Article 11 of the International Covenant on Human, Economic, Social and Cultural Rights (1966) – to which Brazil has been a signatory since 1992 –, as well as Article 25 of the Universal Declaration of Human Rights (1948).

¹⁹ The National Food Security and Nutrition Plan incorporates more than 40 programs and actions.

Brazilian people²⁰. As a result, on the way to 2014, the market guiding development in the sector, and the actions to ensure environmental protection and preservation, as well as enabling public policies involving ministries, State Governments, and city halls²¹, took Brazil off the UN Famine Map (CDHM, 2019).

In this regard, the processes involving the Food and Nutrition Security are dynamic and multidimensional (Tomlinson, 2013; Rambo *et al.*, 2016). Only the creation of Laws and Regulatory Frameworks –to favor the conditions of physical and economic access to food – are not sufficient without the realization of primary conditions. Creating the right conditions for policymakers and civil society actors is crucial, notably securing food for disadvantaged and exposed populations (Santarelli *et al.*, 2018). Such conditions must be articulated so as not to interfere or to worsen a fragile balance, which is often difficult to reconcile in an economic, fiscal, environmental, and sociopolitical setting that favors large agribusiness groups and corporations in detriment of small farmers and traditional communities (Guanziroli & Basco, 2010; Bateman *et al.*, 2013; Paulino, 2014; Mayer, 2016; Santos & Freitas, 2017; Santarelli *et al.*, 2018; Sauer *et al.*, 2018; Ferreira Costa, 2020b).

After the consolidation of the 2008 crisis effects and a controlled slowdown in the Chinese economy, commodity prices and international demand for primary products crashed. Brazil's economy was reshaped hard, which ignited a process that would become the 2015 crisis. To try to solve the problem, the Brazilian government took some fiscal and institutional measures, such as tax cuts and increased public spending to stimulate the economy to avoid the crisis. However, such actions eventually led to a deepening crisis, a fall in GDP, and an increase in public debt (Brancher, 2017). As a result, there was also a reduction of funds, attempts to merge the Ministry of Agrarian Development (MDA) and the Ministry of Social Development (MDS), and paralysis of the new National Agency for Technical Assistance and Rural Extension (ANATER) (Niederle *et al.*, 2019). In a context of economic recession, the decrease in public resources for social sectoral policies, and a series of extreme political developments led to a contested Parliamentary coup, with the destitution of the democratic left-wing elected government, and the emergence of right-wing forces in the political arena. In 2016, Proposed Constitutional Amendments –241 and 55 (PECs 241 and 55²²) were initiated, aimed at setting a ceiling for public spending lasting 20 years (starting 2017). The Chamber of Deputies and the Senate approved the Constitutional Amendment No. 95, of December 15, 2016, based on the discussions on PEC 241 and PEC 55, officially creating a ceiling for Federal Government expenditure, freezing the public investment benchmarked by inflation-corrected figures, for up to 20 years. This political decision determined a decrease in

²⁰ As observed in article 5 of the Organic Law of Food and Nutrition Security. It states that all spheres of government must undertake efforts to respect, protect and guarantee the autonomy of peoples throughout the food chain, through FNS sovereign policies planned and executed per their livelihoods, ways of life, habits, and food practices.

²¹ State and Municipal Conseqs –as part of Sisan –have their legislation, independent of the Federal Law.

²² Depended on the respective Legislative House. PEC 241, of June 15, 2016 –Chamber of Deputies; and PEC 55, of September 11, 2016 –The Senate. Both would originate the Constitutional Amendment No. 95, of December 15, 2016. (Brazil 2016).

investment in areas such as health, education, social protection, and family farming provided for in the 1988's Democratic Constitution. It included cuts that directly affected the population's quality of life as they are related to a mechanism that could lead to a freeze on the minimum wage, decreased public investment in infrastructure and reduced social protection investments –faced with the fiscal tightening due to the limitations of the spending ceiling²³, The reduction of investments in social programs undermined the scope and quality of public services offered by the government to the population, especially impacting those in more need.

In the wake of a movement that gained momentum since the replacement of the democratically elected government –a right-wing political coalition aligned with conservative and ultraliberal ideology took office in October 2016. The transitional government drastically cut Brazil's social programs, mainly reducing the number of poor rural families under protection²⁴. Later, the newly far-right elected central government –on January 1, 2019–, has used the extreme political, fiscal, and economic situation to fuel anti-socioenvironmental strategies in Brazil since then, as a justification for the implementation of even more draconian austerity measures and further dismantling of family farming policy instruments. Such measures have proved harmful to institutions and programs aimed at providing financial, environmental, and social support to more impoverished rural communities and their livelihoods. The slashing of the Brazilian social program safety net was reinforced through Provisional Measure No. 870²⁵ –aimed at restructuring several ministries –, which mischaracterized the Food and Nutrition Security policy agenda and family farming environments by closing the Consea²⁶. It was expected that this political decision would deepen the impacts on the reduction of adaptive social protection levels, with wide-range implications to social risk management efforts in medium- to long-run.

Despite government political repositioning –which is central to current democratic representation in Brazil–, an active mobilization of civil society and, above all, the signaling from different sectors and actors that the Nation is unwilling to allow backward in democratic progress achieved on food security policies has been seen rising in the country. The Provisional Measure No. 870/2019 was modified and voted in the form

²³ The instrument that prevents the growth of expenses above the IPCA variation. This Brazilian official inflation index was reported at 3.22 % (August 2019).

²⁴ The number of people receiving “Bolsa Família” aid was drastically reduced in 2016 and was restored in 2017 (in 2016, 1.5 million fewer people received the benefit than in July 2014) (FGV 2018). The Bolsa Verde program had its budget zeroed in the same period; and, other social programs such as the Food Acquisition Program (PAA), and the National Cisterns Program suffered deep funding cuts (Gross, 2018).

²⁵ Later, converted into Law No. 13,844, of June 12, 2019. Reorganized the structure of organs of the Presidency and its Ministries. Among other initiatives, reduced from 29 to 22, the number of government agencies with ministerial status.

²⁶ The provisional measure attempted to remove from Consea the prerogative to convene the National Conference on Food Security and Nutrition and to define the “composition, organization and functioning” parameters of the group. The passage of the legislation that instructed Consea with the task of “articulating, monitoring, and monitoring” the implementation of the Food Security and Nutrition National Plan, including Consea's composition criteria, was also repealed –Consea was composed by one-third of government representatives and two-thirds of civil society representatives.

of a conversion project by the Chamber of Deputies²⁷, leading to the reactivation of the Consea, fully enforced –concerning its original full text–, and reallocated among the Ministry of Citizenship’s competencies. The measure also repealed parts of the Law that dealt with the composition of Consea. Regardless of this brief victory, this new legal-political phenomenon becomes urgent because it seems to attempt to institutionalize a weakened participatory democratic model, less-inclusive, non-egalitarian, and vertical in the relationship between State and the citizens. It might have implications in the epistemological reinterpretation and recognition of a disbalance in power/rights of legal, political, fiscal, economic, land (Mayer, 2016; Arias *et al.*, 2017), and socially unstable institutional measures towards a weakened family farming setting and limited food security policies (Ortiz *et al.*, 2015; Santos & Vieira, 2018; Niederle *et al.*, 2019). Therefore, the detrimental and antidemocratic operational change proposed by the Provisional Measure No. 870/2019, naturally raised conflicts between the actors involved in the decision-making spheres of food security and family farming in the country (Sauer *et al.*, 2018). Moreover, it showed the political inability –or indifference –of the new far-right-wing government to advance food security discussions and policies onwards. In this scenario, changing settings in institutional measures, and the need to re-found partnerships between civil society, private sector, and the public power are emerging as crucial elements for social legitimation and institutional achievements of the FNS agenda in the country, in a context of rising violations to Human Rights, and the dismantling of Social Protection and Environmental Policies as a consequence of Austerity Policies (Ortiz *et al.*, 2015; Gross, 2018; Santos & Vieira, 2018; Sauer *et al.*, 2018).

The current low-growth economic and unstable political environment in Brazil has been characterized by various expressions of rising poverty and inequality (IN-ESC/OXFAM/CESR, 2018; GTSC A2030, 2018; Santos & Vieira, 2018; Souza *et al.*, 2019) and powered by the dichotomy weakening-reduction of many public policies and actions directly or indirectly related to the guarantee of Food and Nutrition Security, health, and environmental protection. It might be a cause of concern, since political choices, in the form of policy, planning, governance, and institutions, can affect adaptation and vulnerability of human populations (Antwi-Agyei *et al.*, 2015; Brunner & Grêt-Regamey, 2016; Sehmi *et al.*, 2016; Lorenz, 2017). Recent government fiscal and institutional measures are already negatively influencing the environment, social protection levels, and Human Rights battles in the country (UN, 1948; OHCHR, 1966). They demonstrate a clear selective political choice that preserves and expands the gains of the richest, at the cost of the population’s social rights, generating unemployment, economic slowdown, increasing social and economic inequality, and decreasing social protection frameworks (Santos & Viera, 2018). They also reinforce considerable menace and possible irreversible setbacks to adaptation and enhanced resilience towards amplified drivers of uncertainties and frictions (Cesa-Bianchi & Corugedo, 2017). Discouraging investments and impeding resilient and sustainable progress charges a high price in terms of social, environmental, and economic advances (Mayer, 2016; Niederle *et al.*, 2019); in the face of the historical attempts of dismantling public policies oriented to promote or regulate family farming in Latin America, especially in Brazil (Sabourin *et al.*, 2020).

²⁷ PLV 10/2019.

3.2. Fiscal trends: Austerity measures on family farming and rural development budget

Between 2014 and 2016, the entire Family Farming budget spending increased from R\$ 6.6 billion (2014 and 2015) to R\$ 8.1 billion (2016). However, since 2016, the family farming budget has suffered sharp cuts, shrinking to R\$ 5.0 billion (Souza *et al.*, 2019). The first signs of the dismantling of family farming policy instruments in Brazil appeared still during the second mandate of Dilma Rousseff (2014–2016) (Sabourin *et al.*, 2020). In a sense that the overall reduction was 24.2 % from 2014 to 2017, compared to previous years (Souza *et al.*, 2019; Sabourin *et al.*, 2020)²⁸. In 2018, actions by the National Institute of Colonization and Agrarian Reform (INCRA), the Ministry of Agrarian Development (MDA) (extinct in 2016) and the Ministry of Citizenship (previously, Ministry of Social Development –MDS), aimed at agrarian reform and family farming, had not reached a quarter of the nominal value of the 2017 fiscal year. They were less than 10 % of the than established for 2015 (FFE, 2018). Against this dismantling framework, to analyze the impact of fiscal austerity on family farming, the present study assessed the change in federal expenditure –in nominal Brazilian Reais (R\$ or BRL) –specifically regarding the government expenditure committed to family farming in the federal budget from 2016 to 2019, according to data from the Special Secretariat for Family Agriculture and Agrarian Development (SEAD). The study mapped the annual evolution of government nominal expenses in Reais, against the following government budget criteria: Planned; Committed; Executed; Paid out; and Locked; following the family farming budget data made publicly available on the SIGA Brasil Platform (Citizen Panel), by the Federal Senate of Brazil (2020). According to this data, the government budget authorized to family farming dropped from R\$ 1.1 billion (2017) to R\$ 945.0 million (2018) (at the moment of its writing no data was available for 2019). However, data indicated a clear downward trend in government spending in the family farming sector. In the same line, the budgets committed, and executed, indicated reductions from R\$ 961.0 million (2017) to R\$ 893.8 million (2018) (again, no data available for 2019). While the budget paid was limited to R\$ 647.3 million (2017), it was followed by an abrupt reduction to R\$ 505.5 million (2018), and R\$ 512.3 million (2019), indexed in Nominal Value. For comparative purposes, considering the IPCA (Consumer Price Level, inflation indicator), the respective values (budget effectively paid) suffered the following changes: Reductions from R\$ 707.7 million (2017), to R\$ 535.9 million (2018); and to, R\$ 522.4 million (2019), confirming an expected downward trend. In the same period, the amounts frozen (locked) in the budget reached R\$ 232.1 million (2017) and R\$ 95.2 million (2018) (value in Reais indexed to the Nominal Value). When considering these values (frozen or locked) indexed by the IPCA, they reached R\$ 255.5 million (2017) and R\$ 103.0 million (2018) (no data available for 2019 –until May 19, 2020) (Table 1) (Figure 1).

²⁸ We note that this data includes other classes of expenditure, while the present study only targets the budget of the Special Secretariat for Family Agriculture and Agrarian Development.

TABLE 1
Family Farming and Agrarian Development Budget Evolution Expenditure (SEAD*)

Annual Evolution (Values in Brazilian Reals—R\$ Indexed by Nominal Value)

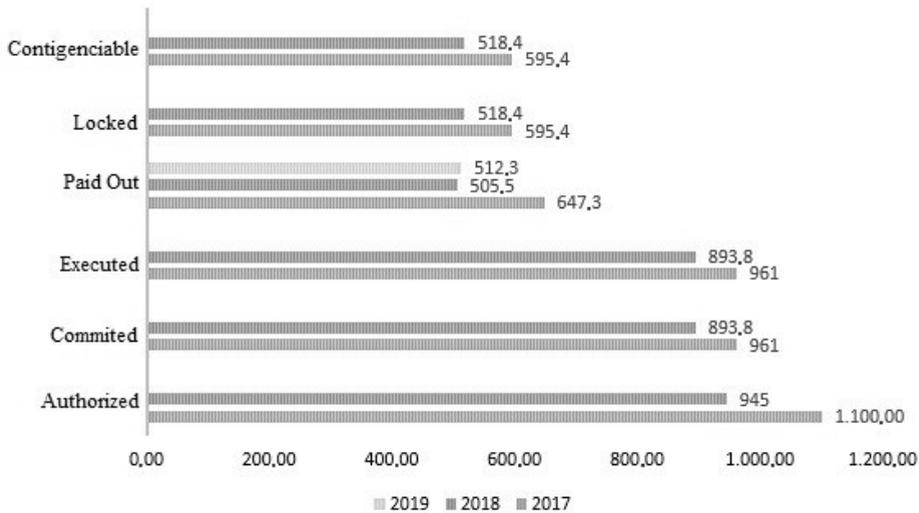
Year	Planned		Executed Expense			Budget Paid		Budget Locked		
	Authorized	Conditional Schedules	Committed (R\$ Million)	Committed (Partial) until April of the Year (R\$ Million)	Executed Expense (R\$ Million)	Executed Expenses (Partial) until April of the Year (R\$ Million)	Paid out (R\$ Million)	Paid (Partial) until April of the Year (R\$ Million)	Blocked in R\$ Millions (% of Liabilities) (% of Authorized)	Contingentiable: in R\$ millions, until April of the respective year (% of Authorized)
2017	1.1bi	-	961.0	86.1	961.0	27.7	647.3	27.4	232.1mi (38.70%) (20.23%)	595.4 (52.08%)
2018	945.0mi	-	893.8	105.2	893.8	31.8	505.5	159.6	95.2mi (20.58%) (9.48%)	518.4 (48.75%)
2019	-	-	-	-	-	-	512.3	31.4	-	-

Source: Adapted from SIGA Brasil (2020) Data Update: Tax and Security: until 05/18/2020. Federal expenditure—in nominal Brazilian Reals (R\$ or BRL). Committed to family farming in the federal budgets from 2017 to 2019, according to the 2016–2019 Pluriannual Plan¹ (PPA). *The Special Secretariat for Family Agriculture and Agrarian Development of Brazil (SEAD); for its acronym in Portuguese—The SEAD was renamed Secretariat of Family Farming and Cooperativism and subordinated to the Ministry of Agriculture (Decree No. 9,667/2019). However, the budget government websites maintained the original name in its pages. Therefore, in this study, we decided to maintain the original name.

The public spending ceiling of the Brazilian federal government, implemented by EC 95/2016, is then materialized in the budget reduction and withdrawal of social protection schemes. Hijacking the 1988 constituent project and the social benefits of reduction of poverty and extreme poverty between 2002 and 2015 (Tesouro Nacional, 2016; Peres & Santos, 2020) –when the country experienced an increase in social spending from 0.3 % to 1.8 % of GDP in the same period (Tesouro Nacional, 2016)–, limiting political actions to reduce social and economic inequalities (Mariano, 2019).

FIGURE 1

Family Farming and Agrarian Development Budget –Federal expenditure in nominal Brazilian Reais (R\$ or BRL)



Source: SIGA Brasil (2020) Data Update: Tax and Security: until 05/18/2020. Committed to family farming in the federal budgets from 2017 to 2019, according to the 2016-2019 Pluriannual Plan²⁹ (PPA).

3.2.1. Contextualizing trends in raising hunger and poverty

There are several associated risks and causes of vulnerability related to agricultural sectors that need to be considered (Ferreira Costa *et al.*, 2016; Hansen *et al.*, 2019; GESER, 2019), such as fiscal and policy developments (EMBRAPA, 2018). According to “The State of Food Security and Nutrition in the World” report

²⁹ Law No. 13,249, of January 13, 2016, which institutes the Union’s Pluriannual Plan for the period from 2016 to 2019. Amended by Law No. 13,588, of January 3, 2018, which modifies the Union’s Pluriannual Plan for the period from 2016 to 2019; and, Ordinance No. 674, of December 30, 2019, which provides for the update of the 2016-2019 Pluriannual Plan.

(2018), FAO placed Brazil and Uruguay as the only countries in Latin America and the Caribbean categorized in the lowest levels of the hunger index³⁰ –less than 5 % of the Brazilian population was then considered suffering from food insecurity. However, more than 18 % were considered overweight or obese (CDHM, 2019). As per Brazil, although hunger and malnutrition rates had improved at the beginning of the 21st century (Jaime *et al.*, 2018), the share of people facing some food deprivation remained considerably high over the years. Data from the Brazilian Institute of Geography and Statistics (IBGE) showed that hunger had not yet been eradicated from the country³¹. In 2013, severe food insecurity was an everyday reality to some 3.6 % of Brazilians. However, IBGE has not collected data on hunger in Brazil since that year (IBGE, 2013), when 22.58 % of residents in private households (urban and rural) faced some level of food insecurity, reaching 40.11 % among residents in rural households, or 12,303 individuals –absolute values in 1000 (Table 2) (IBGE, 2020a). The index corresponded to 7.2 million people in that survey year, way before the most advanced impacts of the 2016-2019 constricted fiscal and economic situation. Concerning poverty rates –in 2016, there were 52.8 million people in poverty in the country. This contingent increased to 54.8 million in 2017 –a growth of almost 4 % in just one year–, mostly concentrated in the North and Northeast Regions of the country. From estimated 54.8 million people living below the poverty line nationwide, 25 million of them were in the Northeast states (IBGE, 2018), with a high prevalence of food and nutritional insecurity, determined by low family income and low food variety (Almeida *et al.*, 2017). In this region, 44.8 % of the population was in poverty in 2017 (Figure 2). They represented 26.5 % of the country's total population, estimated at 207 million³² that year (in 2016, it corresponded to 25.7% of the entire population). As a result of austerity, political, and economic crisis, Brazil had almost 2 million more people living in poverty, while the population in extreme poverty increased by 13 %, from 13.5 million to 15.3 million from one year to another (IBGE, 2018) (Figure 3). Further, the Northeast states portray the prevalence of population losses due to migration (Baptista *et al.*, 2018). The increasing poverty rates, fed by rising inequality, have made socioeconomic indicators fall back to the same level of 2011, possibly erasing all positive socioeconomic results in poverty reduction and hunger eradication throughout the previous decade (FGV, 2018).

³⁰ The rate of people with malnutrition between 2015 and 2017 was “less than 2.5 percent,” according to the organization. FAO does not cite detailed figures for countries with rates below 2.5 % because it considers the figures to be inaccurate, but estimates calculated from various indicators with a margin of error.

³¹ In the IBGE definition, among households with severe food insecurity, one can “go all the way through several phases of food deprivation, and may reach its most serious expression, hunger.”

³² It is estimated that Brazil has 210.1 million inhabitants and a population growth rate of 0.79 % per year, showing a decrease in growth when compared to the 2017/2018 period, according to the 2018 Population Projection (IBGE, 2019a).

TABLE 2
Private Households, Residents in Private Households and Location of Household, by Situation of Food Security Existing at Urban and Rural Households in Brazil, in 2013

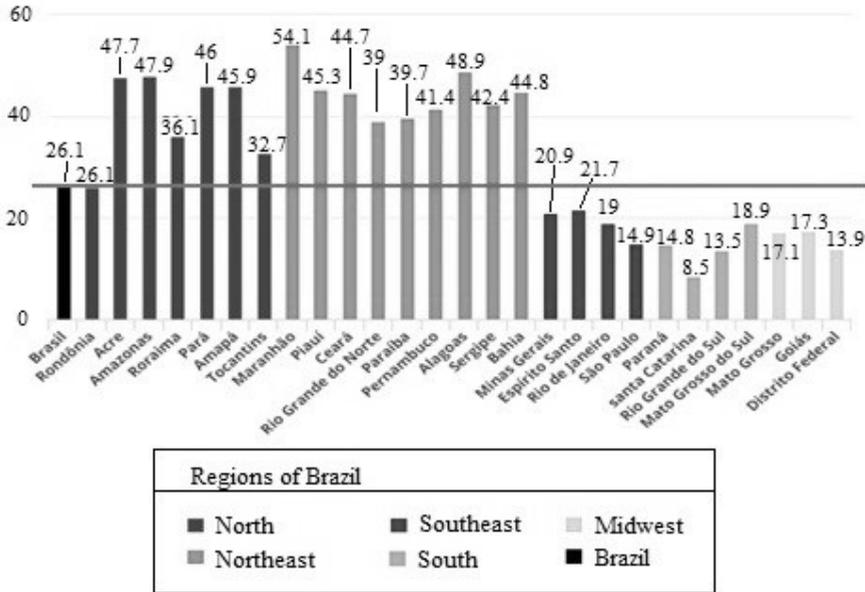
The situation of Food Security Existing in Urban and Rural Households in Brazil

The food security situation at home	Private households			Residents in private households		
	Total	Home situation		Total	Home situation	
		Urban	Rural		Urban	Rural
Absolute Values (in 1000)						
Total	65258	55968	9290	201364	170688	30676
Food Safe	50524	44509	6015	149350	130976	18373
With Food Insecurity	14734	11459	3275	52014	39711	12303
With Mild Food Insecurity	9643	7658	1985	34469	27019	7450
With Moderate Food Insecurity	2985	2207	778	10320	7405	2915
With Severe Food Insecurity	2107	1595	512	7225	5287	1938
Relative Values (%)						
Food Safe	77.42	79.53	64.75	74.17	76.73	59.89
With Food Insecurity	22.58	20.47	35.25	25.83	23.27	40.11
With Mild Food Insecurity	14.78	13.68	21.37	17.12	15.83	24.29
With Moderate Food Insecurity	4.57	3.94	8.37	5.13	4.34	9.5
With Severe Food Insecurity	3.23	2.85	5.51	3.59	3.1	6.32

Source: Adapted from IBGE (2020a), Research Directorate, Labor and Income Coordination, National Household Sample Survey. Sustainable Development Goals (SDGs) (UNDESA 2015)–Objective 2 - Zero hunger and sustainable agriculture Indicator 2.1.2 –Prevalence of moderate or severe food insecurity, based on the Food Insecurity Experience Scale.

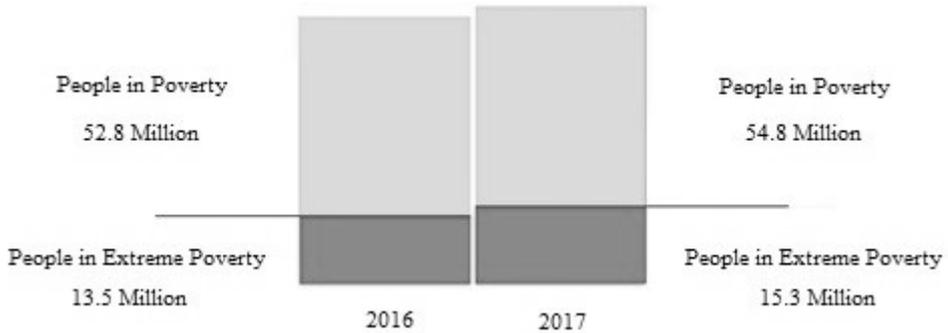
These austerity measures are translated into outcomes of an even more significant socioeconomic backtrack and a growing breach in the poverty reduction targets of UN's Sustainable Development Agenda (2015-2030), and before that, the achievements of Brazil under the Millennium Development Goals (2000-2015). Placing a large share of the people in an extreme situation of social vulnerability, mainly rural and traditional populations (Mattos, 2017). Since the extinction of the Ministry of Agrarian Development (MDA) after the 2016 contested parliamentary turnaround, the majority of public policies aimed at family farming was extinguished or lost relevance, generating worrying effects, such as the massive impoverishment of the rural population, the increase in rural exodus, the drastic reduction of the domestic consumer market, loss of food sovereignty and growing food and nutritional insecurity, in addition to the upsurge of hunger and violence in the countryside (FFE, 2018; Sauer *et al.*, 2019).

FIGURE 2
Percentage Distribution of the Population in Poverty in Brazil, by State and Region in 2018



Source: IBGE (2018). Proportion of persons residing in permanent private housing units with real effective per capita household income of up to US \$ 5.50 PPC daily. Conversion rate from purchasing power parity (PPC, 2011) to private consumption, R\$ 1.66 to US\$ 1.00, inflated by the IPCA for the recent year.

FIGURE 3
The Proportion of Increase in Poverty and Extreme Poverty in Brazil between 2016-17



Source: IBGE (2018).

According to FGV (2018), inequality helps dig a deeper hole for the recession, which increases poverty that, in turn, fuels higher inequality and violence, dropping income levels, and taking a more significant toll amongst the poorest. In this setting, the Total Individual Income Growth rate, from 2014-2015, was negative (-6.64 %) in rural areas, with a loss in all groups of society, with the primary victims being young people (-20.51 % –ages between 25-29 years old; and, -12.49 % –ages between 20-24 years old). Average income dropped 3.44 % between 2015-18, while social well-being dropped 10.6 % between 2014 and mid-2016, which fell back to 2012 levels –remaining stable since then due to rising inequality (FGV, 2018). Bearing in mind that vulnerability to hunger (SDG 2) is directly related to the condition of extreme poverty (SDG 1), the contingency of social expenditures of family farming since 2016 –the PAA, which had executed R\$ 800 million, and benefited 180 thousand farmers in 2012–was then reduced to 75 thousand farmers in 2016. Later experienced a drastic cut, lowering the number of benefited farmers to 25 thousand, having the budget reduced to only R\$ 750 thousand in 2017–, coupled with the weakening of food governance and decharacterization of government institutions and bodies in the sector, led to adverse effects on family farming and food security and nutrition in Brazil (GTSC A2030, 2018).

Brazil left the Hunger Map because the country had established and implemented structural and assistance public policies to fight hunger, as described in the paper. In this regard, assistance policies would be like the “Bolsa Família.” While structuring policies would be the recovery and appreciation of the minimum wage –which causes the withdrawal of thousands of people from the hunger line–, as well as the PAA (Food Acquisition Program) and PNAE (National School Feeding Program). The country’s situation had deteriorated since 2015 due to the economic crisis and four years of austerity measures, as we proved by providing budgetary, fiscal, and institutional data. Moreover, from 2018 onwards, the number of hungry people in Brazil increased by 100 thousand (to 5.2 million) due to the dramatic increase in poverty and unemployment rates (OXFAM, 2020), as well as to radical cuts in budgets for agriculture and social protection, such as occurred in the Bolsa Família program (Niederle *et al.*, 2019). We bring the latest data from family farming budgetary spending, poverty levels, and food security in Brazil to validate our hypothesis. These steps are quite thoroughly documented in the paper. The data demonstrate an increase in the number of people moderately or severely food insecure in Brazil, ranging from 37.5 million people in the 2014-2016 period, to 43.1 million people in the 2017-2019 period, jumping from 18.3 % to 20.6 % of the total population in the same period (FAO IFAD UNICEF WFP WHO, 2020) (Table 3). Moreover, according to the IBGE (2020b), severe food insecurity –in which people reported going hungry –reached 4.6 % of Brazilian households, equivalent to 3.1 million households in 2017-2018 (or 10.3 million people, with 7.7 million living in urban areas and 2.6 million in rural areas). In the 2017-18 period, mild food insecurity increased 33.3 % compared to 2004 and 62.2 % compared to 2013. Moderate food insecurity increased 76.1 % compared to 2013 data, and severe food insecurity grew 43.7 %, largely due to the slowdown in economic activity in the years 2017 and 2018.

TABLE 3
Brazil's Status Towards the Sustainable Development Goals (SDGs) and Global Nutrition Targets Compared in Its Region and Subregion

Prevalence of Undernourishment, Moderate or Severe Food Insecurity, Selected Forms of Malnutrition, Exclusive Breastfeeding and Low Birthweight (Percentage)

Classification	Undernourishment in the total population		Severe food insecurity in the total population		Moderate or severe food insecurity in the total population		Wasting in children (under 5 years of age)		Stunting in children (under 5 years of age)		Overweight in children (under 5 years of age)		Obesity in the adult population (18 years and older)		Anemia among women of reproductive age (15-49)		Exclusive breastfeeding among infants 0-5 months of age		Low birth-weight		
	2004-06	2017-19	2014-16	2017-19	2014-16	2017-19	2019	2012	2019	2012	2019	2012	2019	2012	2016	2012	2016	2012	2016	2012	2015
Prevalence	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Upper-Middle Income Countries	7.3	3.0	3.9	4.8	15.0	18.3	1.8	9.3	6.0	8.1	8.8	12.2	13.9	22.3	26.1	29.9	26.7	7.4	7.3		
South America	7.6	5.5	5.7	7.7	23.2	29.4	1.3	9.2	7.3	7.6	7.9	21.1	23.0	22.7	23.9	41.9	n.a.	8.6	8.6		
Brazil	4.1	<2.5	1.9	1.6	18.3	20.6	n.a.	7.0	n.a.	6.4	n.a.	20.1	22.1	25.3	27.2	38.6	n.a.	8.4	8.4		

Number of People Who are Affected by Undernourishment, Moderate or Severe Food Insecurity and Selected Forms of Malnutrition; Number of Infants Exclusively Breastfed and Number of Babies Born with Low Birthweight (Millions)																						
Classification	Undernourished people		Severely food-insecure people		Moderately or severely food insecure people		Children (under five years of age) affected by wasting		Children (under five years of age) who are stunted		Children (under five years of age) who are overweight		Adults (18 years and older) who are obese		Women of reproductive age (15-49) affected by Anemia		Infants 0-5 months of age exclusively breastfed		Babies with low birth-weight			
	2004-06	2017-19	2014-16	2017-19	2014-16	2017-19	2012-19	2019	2012-19	2019	2012-19	2019	2012-19	2016	2012	2016	2012	2016	2012	2016	2012	2016
Number	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	Millions	
Upper-Middle Income Countries	178.4	80.1	102.1	129.4	394.6	493.0	3.3	16.9	11.0	14.6	16.1	233.6	276.9	153.1	176.5	114	9.8	2.8	2.7			
South America	28.4	23.5	23.7	32.5	95.5	125.5	0.4a	3.1	2.4a	2.5	2.6a	68.4	67.9	24.8	26.9	2.8	n.a.	0.6	0.6			
Brazil	7.7	n.r.	3.9	3.4	37.5	43.1	n.a.	1.1	n.a.	1.0	n.a.	28.4	33.3	14.1	15.5	1.1	n.a.	0.3	0.2			

Source: Adapted from FAO, IFAD, UNICEF, WFP and WHO. 2020. < 2.5 = proportion of undernourishment less than 2.5 percent; < 0.5 = prevalence of severe food insecurity less than 0.5 percent; < 0.1 = less than 100 000 people; n.a. = data not available; n.r. = data not reported.

4. Recommendations and Further Steps

The macro vision of the Food and Nutrition Security (FNS) Agenda in Brazil highlights the valorization of self-sufficiency in local food production. However, this vision has often failed to recognize other relevant aspects of incompatible systems and policy dynamics concerning democratic decision-making countrywide. Brazil accelerated action by elevating the political visibility of food security and focusing on concrete solutions to family farming needs and demands in previous years, enabled a robust policy environment that included multi-sector institutions, multiple policy pathways, and multi-level governance to scale up the adoption of SDG1 and SDG2 nationwide. Nonetheless, the governance framework has proved vulnerable to the shifting political will. In this regard, discussing and seeking to understand the impacts of austerity measures on food security levels remains an increasing challenge. More investigations are needed to broaden our understanding of this matter and support establishing an alternative agenda to replace austere fiscal policies. Moreover, considering the ongoing and future effects of COVID-19, this research emphasizes the need for additional research on enabling policy environments and fiscal and institutional measures capable of positively impact family farming policies. Both from food security and environmental sustainability perspectives, with more significant efforts to ensure inclusive economic growth, social protection, fiscal and political responsibility, and the accurate identification of affected and vulnerable populations to allow the design and implementation of effective FNS Agenda and related policies under SDG1 and SG2 goals.

5. Conclusions

The research contributes to a broader understating of austerity measures and institutional instability, impacting the nexus of sustainable development, within the sole South American context, accommodating the study of complex policy-meaningful research questions that matter in the real world. It outlines an undeniable transition towards a new paradigm implicating the reduction in scope and quality of the social protection agenda, impoverished territorial development, trick fiscal and economic environments, and weakened sustainable and inclusive investments described in terms of policy development. It indicates the pertinent need for revision of policy decisions to the sector. The government's fiscal and economic policy decisions are adjustment measures of political choices, and, through them, the government defines ways for economic growth and management of public debt and deficit, with greater or lesser social impact. In Brazil, the dismantling of public policies oriented to promote and regulate family farming is now explicit, and they have been translated through a precise cut of government budget authorized, committed, and productively invested in this sector. Interpreted under draconian austerity measures reshaping the financial and social security spheres of government spending trends. It has already inflicted several adverse side effects on entire populations by reducing social well-being, democratic participation, social protection, and Human Rights. Government

interventions in the period, both at the policy, institutional, and budgetary levels, have already retro fed the population's vulnerability due to aggressive fiscal and institutional measures weakening the food security policy environment, resilience, and sustainable development perspectives.

The investigation of the budgetary austerity trends on social protection expenditure and vulnerability implications on family farming in Brazil gave visibility to a broad range of socioeconomic and fiscal data, focusing on the effects of austerity measures in the levels of social protection among vulnerable populations in Brazil. The narrative built around the context of family farming social protection, which included hunger (most recently available official data) as a critical element –but not the only one–, combined growing concerns over austerity measures impacting food security and poverty levels in Brazil, recognized an increase in populations' vulnerability according to available data from the IBGE, the IPEA, and updated scientific literature. We looked to budgetary, institutional, and poverty trends to infer vulnerability. Accurately, we assessed budgetary data from the Special Secretariat for Family Agriculture and Agrarian Development of Brazil (SEAD*; for its acronym in Portuguese). The adverse effects of decreased public spending on family farming social protection, ensured by evidence-based information, were combined with the political and fiscal policy development to depict emerging food and nutrition insecurity trends. We presented specific data on vulnerability at the national level. Although we bring the latest data on food security in Brazil, the lack of availability or reporting on disaggregated data on hunger and poverty represents a limitation of the research. Nevertheless, we reinforce that we observed state-of-the-art research practices in recording, keeping, publishing secondary data, and knowledge to avoid/mitigate risks of present inaccurate or incomplete data.

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