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The Price Subsidy Policy in Brazilian Agriculture: Peculiarities and Contradictions

A Política de Subsídio de Preços na Agricultura Brasileira: Peculiaridades e Contradições

La Política de Subsidio de Precios en la Agricultura Brasileña: Peculiarias y Contradicciones

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RESUMO
O presente artigo tem como objetivo indicar as peculiaridades e contradições encontradas nas políticas de subsídio de preço na agricultura brasileira na última década. Apesar dos esforços do Estado realizados através da Política de Garantia de Preços Mínimos (PGPM), eles não têm sido uma boa alternativa para vários produtores. A interpretação da Escola Austríaca indica que a informação não está disponível de forma homogênea aos agentes econômicos e as intervenções de preços, quanto à concessão de subsídios, tem custos não revelados que aumentam a assimetria de informação dos candidatos à política de preço mínimo, não conseguindo atingir objetivo de reduzir essa assimetria de informações de mercado.

ABSTRACT
The present article aims to indicate the peculiarities and contradictions found in the price subsidy policies in Brazilian agriculture in the last decade. Despite State efforts carried out through the Minimum Prices Guarantee Policy (PGPM, in the original Portuguese), they have not been a good alternative for several producers. The Austrian School interpretation indicates that the information is not available in a homogenous way to economic agents and price interventions regarding the grant of subsidies, it bears unrevealed costs that raise the information asymmetry of the candidates for the minimum price policy, being unable to reach its objective of reducing such market information asymmetry.

RESUMEN
El presente artículo tiene como objetivo indicar las peculiaridades y contradicciones encontradas en las políticas de subsidio de precio en la agricultura brasileña, en la última década. A pesar del esfuerzo realizado por el estado a través de la Política de Garantía de Precios Mínimos, esto no ha sido una buena alternativa para varios productores. La Escuela Austriaca de Economía considera que la información no está disponible de forma homogénea a los agentes económicos. Por lo tanto, como las concesiones de subsidios tienen costos no revelados, acaban aumentando la asimetría de información en lugar de reducirla.

INTRODUCTION

Despite playing a prominent role in the production and exports of agribusiness products, being today one of the main global *players*, Brazil's agriculture still finds itself relatively dependent on government actions. In the last years agribusiness has been revealing itself as a sector of extreme relevance for the country, presenting a positive balance amid a full economic crisis, propitiating foreign exchange and jobs at important times. Such performance has generated big political turnarounds, in which agribusiness representatives make use of these figures in order to press the government to direct more resources to the sector, in the sense of "protecting" the economy, jobs and incomes of Brazilians. However, such a strategy must be analyzed in depth so as not to generate undesirable outcomes.

Any State action must be understood as a Public Policy, its revenues originating from taxation, utilized to finance its actions. This way, Public Policy spending is justified if a better use is attributed for such resources comparatively to the sum of uses that its contributors were going to perform.

In the Austrian perspective, economist Ludwig von Mises (1929; 1952) states that interventions contradict economic logic, it being very unlikely that the State will manage to perform a more efficient destination of individuals' resources, mainly due to market distortions that such interventions might generate. That said, the objective of this article is to indicate possible contradictions in the present minimum prices policy aimed at the Brazilian agricultural sector, and to describe the understanding that the Austrian School of Economics may have on the matter.

1 THE BRAZILIAN MINIMUM PRICES GUARANTEE POLICY

Created by law-decree no. 5212 of January 21, 1943 (1943) the Commission for Production Financing (CFP, in Portuguese) started the Minimum Prices Guarantee Policy (PGPM), which was exercised through two main instruments: Federal Government Acquisitions (AGF) and Federal Government Loans (EGF). Although the PGPM has officially come into force only in 1943, the Brazilian State already conducted minimum price policies, as in the cases of the Taubaté Agreement (1906), the Commission for the Defense of Sugar Production (1931), the Sugar and Alcohol Institute (1933), among others (DELGADO; CONCEIÇÃO, 2005). The objective of the PGPM from its creation to the present days is to guarantee a minimum income to the agricultural producer, as well as minimum strategic state stockpiles aiming to decrease the variability of agricultural prices, mainly when those tend to reach very low baselines. This way governments,

while allocating more or less resources to this policy, seek to influence the risk of agricultural activity, aiming at assuring agricultural products availability.

Throughout the years, but mainly in the 1990s, the PGPM has suffered many alterations; most of all for issues of fiscal squeeze, economic opening, inflation control and changes in exchange policy. The main changes occurred in the sense of reducing State intervention in the agricultural markets and unburdening the Treasury, as observed in Table 01.

Table 01 - Main Changes in the PGPM

Year	Motivation	Statutes
1990	Reform of Commercialization and Supply State Agencies	Law no. 8.029/1990
1991		Law no. 8.171/1991; Law no. 8.174/1991; Interministerial Ordinance no. 182/1994
1996/ 1997	Reduction of public intervention in the agricultural markets and of government spending with the upkeep of stocks	Laws no. 8.427/1992 and no. 9.848/1999; Regulation for Premium Offerings for Product Flow – PEP no. 001/1997
		Resolution CMN/BACEN no. 2.260/1996; Regulation for Sale of Option Contracts in Agricultural Products no. 001/1997 – Conab.
2004		Laws no. 1.1076/2004 and no. 1.1775/2008; Regulation for the Offering of Risk Premiums for the Acquisition of Agricultural Products Originating from Selling Options Private Contracts – PROP no. 001/05 – Conab.
2006		Laws no. 8.427/1992 and no. 9.848/1999; Regulation for the Operationalization of Offerings of Equalizing Premiums Paid to Producers – PEPRO no. 001/06 – Conab.
2008	Simplification of the minimum price setting process	Law no. 11.775/2008
2009	Structuring productive arrangements of sociobiodiversity	Law no. 11.775/2008; Ordinance MAPA 543/2009; Interministerial Ordinance no. 539/ 2009

Source: Ramos and Morceli (2010, p. 6-7). Adapted by the authors.

The so-called "old instruments" (AGF and EGF) gave way to the "new instruments", more integrated with private agents and bringing into consideration the dynamics of the agricultural market itself, inspired by mechanisms of the Brazilian Commodities and Futures Exchange. In Table 02 it is possible to observe a brief summary of how the main PGPM instruments executed today in Brazil work.

Table 02 - Main PGPM instruments executed today in Brazil

Name	Definition
Acquisition by the Federal Government (AGF)	Composition of the public stockpile by the Government through purchases directly from producers that stores products in locations registered by the National Supply Company (CONAB)
Agricultural Products Selling Option Contract (COVPA)	Deed handed through auctioning by the Government to producers and cooperatives. The bidder has the option, at the date of contract expiration, of selling their product to the public stockpile by the affixed price at the deed's issuance.
Private Option Risk Premium (PROP)	Similar to the COVPA, but it is the private sector who issues the contract. The Government pays the private agent a premium (established though auction) referring to the difference between the minimum price and market price on the date of the contract's expiration.
Product Flow Premium and Value (PEP and VEP)	Premium paid by the Government referring to the difference between the minimum price and market price (usually equivalent to the shipping among two regions), used to transfer products between two regions. VEP is for public stockpiles.
Equalizing Premium Paid to the Producer (PEPRO)	Premium paid to the producer (who participates in the auctioning) referring to the difference between the minimum price (or another established price) and market price.

Source: Adapted from Ministry of Agriculture and Livestock of Brazil (2016, p. 30-33).

As shown in Table 03, it is possible to distinguish these main instruments in three types of intervention policies in the agricultural market.

Table 03 - Types of PGPM intervention in the agricultural market

Policy type	PGPM instruments
Government Surplus Acquisition Policy (PCEG)	AGF
Price Insurance Policy (PSP)	COVPA and PROP
Price Subsidy Policy (PPS)	PEP and PEPRO

Source: Adapted from Schwantes and Bacha (2017).

Considering PEP, PEPRO and AGF, the instruments that received a larger quantity of resources were PEP and PEPRO, as shown in Figure 01, and they can be characterized as the main tools of this policy.

Figure 01 - Concentration of Resources among AGF, PEP and PEPRO, from 2005 to 2016
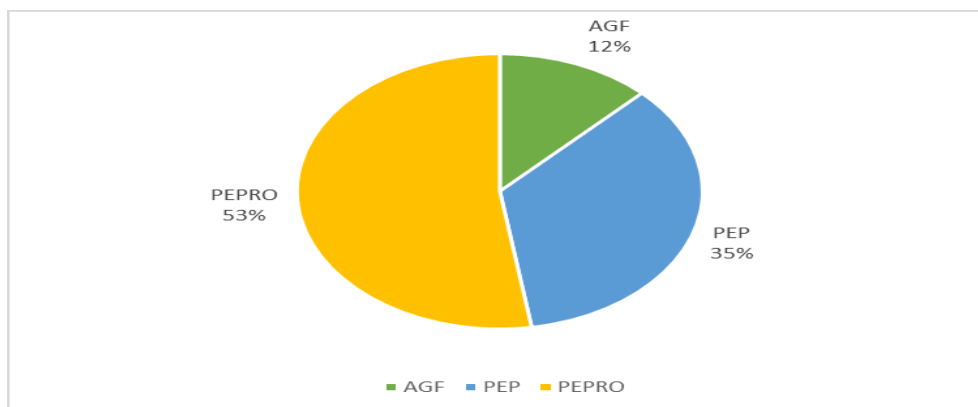
Source: Prepared by the authors with CONAB data.

For the sake of data availability and representativeness in the utilization of resources destined to the PGPM, the present study will focus on the instruments of PEP and PEPRP, that is the Price Subsidy Policy of the PGPM. These instruments, from 2005 to 2016, encompassed a variety of productions, such as: cotton, rice, rubber, coffee, beans, orange, milk, corn, sisal, soy, wheat, grape and wine, among others.

When the Government activates one of these instruments (PEP or PEPRO) it places at the producer's disposal resources that will subsidize the commercialization of agricultural products, guaranteeing a minimum price for those producers. By its historical performance and the significant quantity of products that the PGPM encompasses, an overwhelming influence of the State in various Brazilian agricultural markets can be noticed.

This kind of policy directed towards agriculture is not a peculiarity of the Brazilian agriculture. Fulginiti and Perrin (1993) performed a study on the impacts of agricultural price interventions in 18 developing countries. Elinder (2005, s/p) points out that "the European Union spends almost €2bn (£1.4bn, $2.4bn) a year to maintain production levels at 20% above the domestic demand and at prices twice as high as in the world market". Rausser and De Gorter (2014) describe a budget of almost US$40 billion for commodity programs under the US Farm Security and Rural Investment Act. Table 04 shows the evolution of the amount of public spending allocated to agriculture in developing countries. Discussion of agricultural subsidies varies among countries, and discussing these differences is not in line with the objectives of this paper.

Table 04 - Public expenditure in agriculture 1980-2002.

Region	Constant 2000 $ (bn)				% of agricultural GDP			
	1980	1990	2000	2002	1980	1990	2000	2002
Africa (17)	7.3	7.9	9.9	12.6	7.4	5.4	5.7	6.7
Asia (11)	74.0	106.5	162.8	191.8	9.4	8.5	9.5	10.6
L. American and Caribbean (16)	30.5	11.5	18.2	21.2	19.5	6.8	11.1	11.6
Total Developing Countries	**111.8**	**125.9**	**190.9**	**225.6**	**10.8**	**8.0**	**9.3**	**10.3**

Source: Akroyd and Smith (2007, p. 2).

2 THE EVIDENCED CONTRADICTION

Despite the objectives of Public Policies, agents are known to act in such a way as to put themselves always in a situation of greater satisfaction in relation to their previous one. But as Mises (2010) puts it, it is not possible to identify precisely the psychic motives that cause these

actions, as this is the field of study of psychology. However, it is possible to observe an agent's decision, expressed by their conscious action, and this information is sufficient for the field of study of economy. Many variables can influence how economic agents interact with Public Policies, and in the case of PGPM the action of adhering or not to the Policy provides evidence capable of informing us if such policy is, as its initial objective, managing to take producers to a higher degree of satisfaction.

Throughout the year PGPM may be activated many times, always when market prices are below the minimum prices stipulated by the Government. Every time it is activated, it means that resources are being destined to assist producers in the assurance of their incomes, just as with PEP and PEPRO. However, from the official information it is possible to notice that, despite being offered when market prices find themselves at low standings, this "help" from the Government is being rejected at considerable proportions. As Figure 02 shows, in 2013 approximately 78% of resources destined towards PEP and PEPRO were effectively used by producers. In 2016 this number decreases to approximately 47%. In other words, a considerable percentage of resources allocated at the disposal of producers, as a way to guarantee minimum prices, was not utilized. Even in a scenario with low market prices, producers opted for performing their transactions in the market, instead of using the Price Subsidy instruments of PGPM.

Figure 02 - Negotiated and not-negotiated proportions in relation to the total quantity of resources offered by the Government via PEP and PEPRO
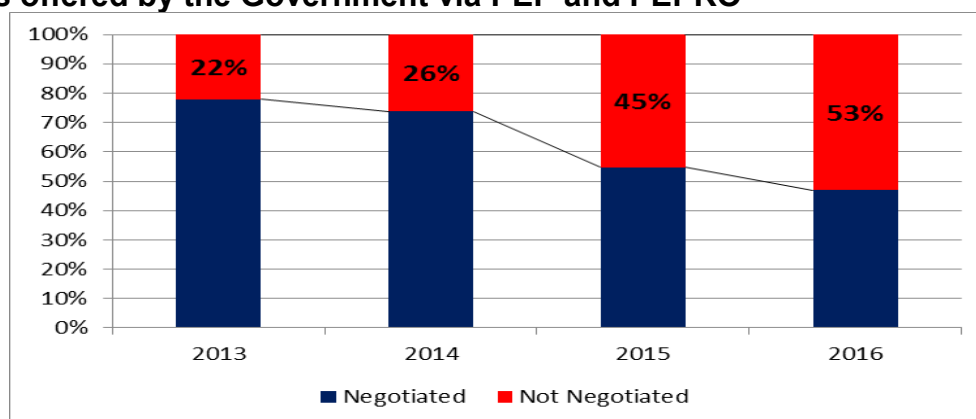
Source: Prepared by the authors with Conab data.

It can be perceived that in Brazil, from 2013 to 2016, more producers opted not to adhere to the minimum prices (via PEP and PEPRO) offered by the Government, looking for other ways of avoiding the problem of negative price variations for their products. In 2016 around 53% of the resources destined to PEP and PEPRO were not used by agricultural producers, while in 2013 this share represented only 22%. The question that surrounds this data is this: with a low market

price (inferior or very close to the floor) why did producers not opt to adhere to the PEP and PEPRO instruments offered by the Government?

3 AUSTRIAN PERSPECTIVE

The Austrian outlook of L. V. Mises may be assertive at explaining such a contradiction as found in this policy. It criticizes the demand for accurate predictions that disregard the impossibility of eradicating the uncertainty inherent in the sphere of action (MISES, 1962). The mainstream idea ignores the prices as a market process "which is the result of these laws, determines prices and that the system of market prices provides the rationale of human cooperation" (MISES, 1940, p. 24).

To make decisions, Klein and Klein (2001ᵃ, p.8) mention that the "entrepreneur must weigh the costs and expected benefits of various courses of action" and needs information about all prices to understand the possibilities of making profits. In fact, Rothbard (1962, p. 886) pointed out that "land and labor factors move in accordance with the owners' desire for higher incomes, and highly value-productive factors are rewarded accordingly". The decisions are based on: expectation "about future prices and information contained in present prices" (KLEIN and KLEIN, 2001ᵇ, p. 9). This is the idea that rules the productivity increases in activities related to agribusiness: a more urgent demand for *international agricultural commodities* will inspire entrepreneurs of this sector to incorporate more technologies possible to operate at reduced costs in order to generate bigger profits.

When subsidized incentives deviate entrepreneurs from this productive focus, looking instead for credit and subsidized prices, there will be bureaucratic costs unknown to producers, since the information needed to meet the bureaucratic criteria of access to the price policy are unknown, given that "bureaucratization is necessarily rigid, as it involves the observance of established rules and practices" (MISES, 2015, p. 543). In regard to the proposal for subsidies, there is not a problem of indifference:

> In this case there would be no genuine dichotomy between the best alternative, which we called success, and other alternatives, which are relative failures. And it would not be clear at all which meaning should be attached to the notion that alternatives differ in their objective importance. (HÜLSMANN, 2000, p. 8)

For Kirzner (2015), the perspective of L. V. Mises about how decision-making behaves is intimately connected to the fact that markets provide the best information on prices. Government

interventions are not capable of substituting the market process, as a continuous effort, to correct information asymmetry.

In this sense, the Austrian perspective indicates that information is not available in a homogenous way to the economic agents and that price interventions, regarding subsidy offerings, possess unrevealed costs that increase the information asymmetry of candidates to the minimum price policy, not managing to achieve its objective of reducing such asymmetry from the market.

3.1 An analysis proposal concerning the heterogeneity of producers and bureaucratic costs

One of main objectives of PGPM is to guarantee a minimum price to the agricultural producer, decreasing variability of prices and consequently the risk, supporting their permanence in the market. In academic literature, the effects of such intervention are estimated using neoclassical models. Thus, starting from the neoclassical theory of the firm, the minimal price for the assured permanence of the producer in activity must pay exactly the Average Variable Cost (AVC), or else:

P_{min} > AVC → Successive excesses of supply, overcrowding of stockpiles and crisis.
P_{min} > AVC → Innocuous Policy.

This analysis has specific assumptions; however, the one of interest will be the supposition of perfect price zoning[1] and of homogeneity in the entrepreneurial behavior of producers (such as dedication, technical capacity, ability to make deals, etc.).

The first point that needs highlighting is the impossibility of performing a perfect price zoning. That is, given the sheer size of the Brazilian territory, to identify exactly the common areas for input prices would demand so much time that by the end of such identification prices would probably have already been modified, making the database always out of date.

However, even if we suppose that CONAB is capable of performing a perfect price zoning, that is, perfectly separate geographical/economic areas where production input prices are equivalent, in a region of homogenous prices producers will not be homogenous themselves. In other words, producers being different among themselves, there will be different AVC curves:

$$AVC = \frac{TVC}{Q} \tag{1}$$

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[1] Price zoning is the act of separating geographical areas by influence of input prices, so that a single minimal price does not pay differently two producers who have different costs for being geographically distant from one another.

Where:

AVC = Average Variable Cost;

TVC = Total Variable Cost;

Q = total output.

In case the producer expands their cultivated area the produced quantity will grow. However, keeping the area constant, that is, supposing the producer will not expand their planting area rapidly, the quantity Q produced will be then influenced by the productivity of that producer. Productivity is influenced by individual and subjective characteristics of the producers themselves, mentioned earlier, such as dedication.

In order to illustrate such a question, suppose two producers A and B, being different with regards to their commitment to their crops, or simply different in productivity by any other factor, individual or subjective. Suppose also that A and B are affected by one single perfect price zoning. Graphically it is possible to realize that the AVC curves of A and B are different since, based on equation (1) above, one is more productive (has a lower AVC) and the other is less productive (has a higher AVC). For the sake of the picture, suppose that producer A is more committed to their crop and, despite paying the same price for inputs as producer B (that is, having equivalent Variable Cost), they have a larger income and therefore their Average Variable Cost curve is lower.

Figure 03 - AVC curves for producers A and B
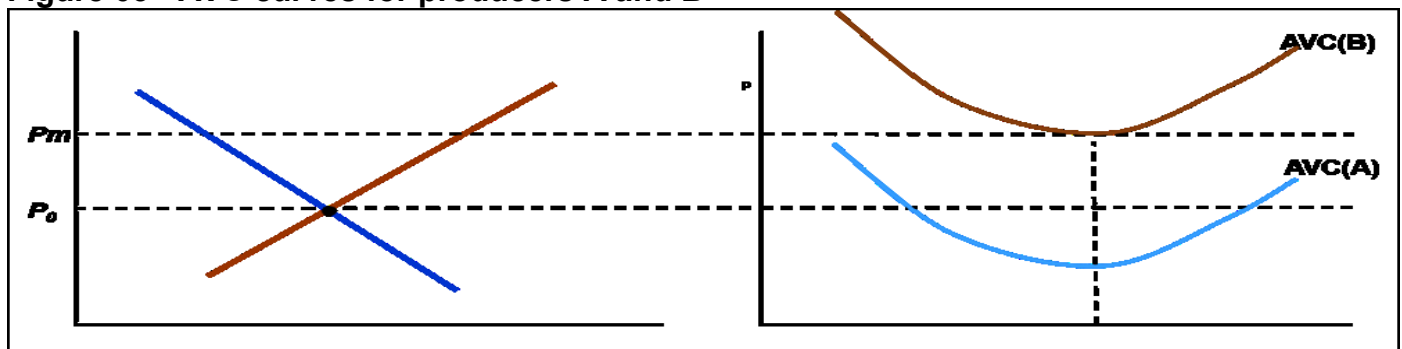
Source: Prepared by the authors.

In case of an intervention in the Neoclassical model of minimum price policy and still maintaining the example of producers A and B, we have Figure 04.

Figure 04 - Minimum Price Policy in the Neoclassical Model and the Δ + β Advantage
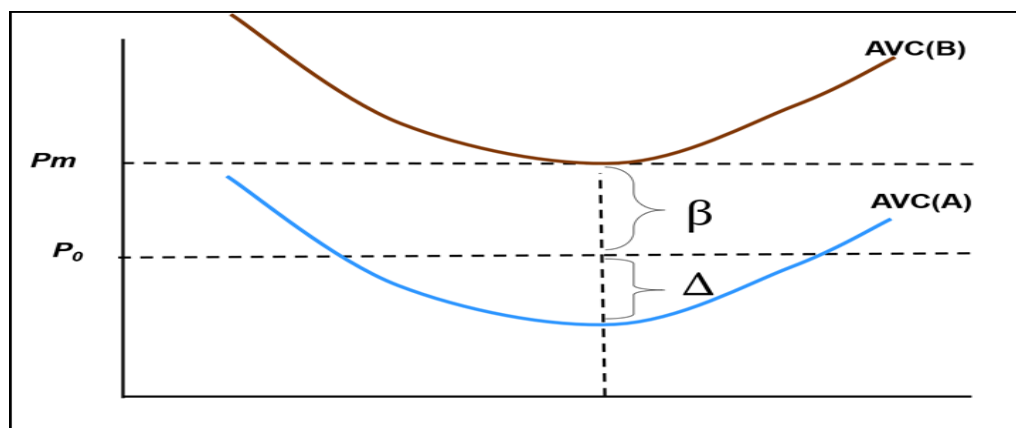
Source: Prepared by the authors.

The analysis of the Figures 03 and 04 can be made in the following manner:

(1) Producer A presents differences in relation to producer B, denominated: Difference Δ which refers to the difference between the AVC of producer A and Market Prices; and Difference β, which is the difference between the market price and the minimum price.

(2) It is known that, for the producer to have access to government policies like, for example, PGPM effected by CONAB, there is a bureaucratic process that generates positive transaction costs. That being the case, there are positive transaction costs for producer B to access PGPM, and they will only be incentivized to access this policy if Difference β more than compensates these costs.

(3) In a similar way, producer A will only be willing to access PGPM if Difference β more than compensates additional transaction costs.

(4) The larger the Difference β the more producer B will be willing to incur in additional transaction costs in order to have access to the minimum price.

(5) The larger the Difference β in relation with Difference Δ, the more producer A will be willing to incur in additional transaction costs in order to have access to the minimum price and vice-versa.

Going from this perspective (Differences Δ + β) it is possible to explain the reason why not all producers will reach for the contracts issued by CONAB. Only those who, as could be the case with producer B, realize that Difference β will more than compensate the additional costs for access to the minimum price or, like producer A, realize that Difference β in relation to Difference Δ will more than compensate the additional costs for this access.

This price subsidy policies inability is related to the heterogeneity of information among producers and the difficulty of central planning to acquire all necessary information, making *public*

policy makers into "the victims of the synoptic delusion and forget that these plans owe their seeming clarity to the planner's disregard of all the facts he does not know" (HAYEK, 1973, p. 74).

In a scenario of subsidies there is one minor incentive for agents to learn how to prevent the consequences of their bad actions. Producers who acknowledge the bureaucratic costs of price subventions as too high will search in technology for a way to achieve efficiency and an effective cost reduction, while subsidies will remain attractive only for the least efficient producers. Such is a *Malinvestment*, where the ones who benefit from subvention don't suffer the negative consequences of their choices in a complete way, since they may wait for new credits to cover up their losses, and this way the waste of capital becomes noteworthy (HÜLSMANN, 2008).

4 CONCLUSION

The main point of this work is to elaborate on the evidences that corroborate the fact that, despite State's efforts carried out by the Minimum Prices Guarantee Policy (PGPM), it has not been a good alternative for various producers. That can be confirmed by the increasing PEP and PEPRO percentages offered by the State that are simply not being used by producers themselves.

Starting from the proposed reasoning, this paper suggests that producers who feel incentivized to participate in the PGPM Price Subsidy instruments are the least productive when compared to the ones not resorting to this subsidy. This kind of interference in market dynamics may be creating disincentives for less productive producers to aim for an increase in productivity, since there is an alternative that minimally pays for their production costs, PGPM.

It can be taken from this analysis that the higher the minimal price, the higher the number of distortions that will be created and also the number of producers who will try to access government subsidies instead of real increases in productivity.

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