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Research Report

The Political Economy of Food Policy During Price Spikes

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The Political Economy of Food Policy During Price Spikes*

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Introduction

A large political economy literature has focused on what Kym Anderson (2009) refers to as “distortions to agricultural incentives”. Governments are regularly under pressure from agricultural producers and food consumers to intervene in agricultural and food markets. In the longer run, this has led to a series of “patterns” of policy distortions.

However in recent years, much of the discussion on global agricultural and food prices has focused on the volatility of these prices and the associated policy interventions. While economists and advisors point at the importance of reducing price volatility based on efficiency gains, economists and policy advisors have often been critical of these policy interventions, criticizing governments for (a) being ineffective, (b) causing distortions in the economy, and (c) reinforcing price fluctuations, etc. (e.g. Anderson et al., 2013).

LA FERDI EST UNE FONDATION RECONNUE D'UTILITÉ PUBLIQUE. ELLE MET EN ŒUVRE AVEC L'IDDRI L'INITIATIVE POUR LE DÉVELOPPEMENT ET LA GOUVERNANCE MONDIALE (IDGM). ELLE COORDONNE LE LABEX IDGM+ QUI L'ASSOCIE AU CERDI ET À L'IDDRI. CETTE PUBLICATION A BÉNÉFICIÉ D'UNE AIDE DE L'ÉTAT FRANÇAIS GÉRÉE PAR L'ANR AU TITRE DU PROGRAMME « INVESTISSEMENTS D'AVENIR » PORTANT LA RÉFÉRENCE « ANR-10-LABX-14-01 »

.../... The basic economic model with static supply and demand equations and perfect markets is not very adequate to capture and measure distortions and inefficiencies in such conditions of market imperfections and volatility. In this perspective, Pieters and Swinnen (2015) develop a model to analyze to what extent governments have traded off price distortions for reduced volatility in intervening in agricultural markets. They analyze how much distortions a welfare maximizing government would introduce when it cares about stability. They find that several countries have been able to reduce price volatility in the domestic markets while at the same time allowing structural price changes to pass through. However, they also conclude that even when explicitly taking into account this trade-off (and the benefits of reducing volatility), many policy distortions do not seem to be consistent with minimizing volatility on domestic markets and that there is, thus, much room for policy improvement.

► Research Question

The objective of this paper is to use a political economy model to explain the policy distortions when one allows for stability concerns and objectives for interest groups and politicians. We develop a Grossman-Helpman-style model to analyze how much distortions a government would introduce when it cares about stability (i.e. if it wants to limit price volatility for domestic producers and consumers) and when its decision is influenced by lobbying of producers and consumers in a situation with limited policy options. We also test to what extent governments have been trading off distortions for stability and to what extent our results are influenced by interest groups.

► Methodology & Results

The Model

Consider a government that sets the domestic price such that it maximizes its political objective function. Following Grossman and Helpman (1994), we assume that the political objective function is a weighted sum of the political contributions of consumers, political contributions of producers and social welfare. The government maximizes the following objective function:

$$\max_{p^D} (1+\alpha^c) [u^c(p^D)] + (1+\alpha^p) [u^p(p^D)] \quad (1)$$

with α^c and α^p representing, respectively, the lobby power of consumers and producers and u^c and u^p representing consumer and producer utility. Consumer (producer) utility is defined as consumer surplus (profit) minus a welfare cost of price volatility which is dependent on its preference for stability $\delta(\mu)$ and the share of the budgetary cost of the government's price policy.

As a result, the government will set its optimal domestic price by trading-off reduced volatility ($p^{D^*} - p^{-W}$) for distortions ($p^{D^*} - p^W$):

$$(p^{D^*} - p^W) = \frac{A}{B} (p^{D^*} - \bar{p}^W) - \frac{A \cdot C}{B(1+C)} (p^{D^*} - \bar{p}^W) \\ \frac{D}{B(1+C)} (p^{D^*} - \bar{p}^W) + \frac{E-C \cdot F}{B(1+C)} \quad (2)$$

with

$$A = (\delta + \mu) \\ B = D'(p^{D^*}) - S'(p^{D^*}) \\ C = \alpha^c \gamma^c + \alpha^p \gamma^p \\ D = \alpha^c \delta + \alpha^p \mu \\ E = \alpha^c D(p^{D^*}) - \alpha^p S(p^{D^*}) \\ F = D(p^{D^*}) - S(p^{D^*})$$

The first term represents the optimal combination of volatility and distortions when there is no lobbying. The level of distortions accepted by the government for reduced volatility depends on the ratio of the preferences for stability over the marginal distortionary effects of the price policy (factor $\frac{A}{B}$). As shown in Figure 1, the optimal choice of the government (E_0) will be more towards the North-West of the trade-off line when consumers and producers have higher preferences for stability and for lower marginal distortions.

The second term takes into account how much each lobby group will be affected by the budgetary effect of a deviation from the international price. If consumers have more lobby power than producers and at the same time bear the largest share of the budgetary costs, the consumer will bargain for a domestic price with more volatility and less distortions (see Arrow 1 in Figure 1).

The third term gives more weight to the relative stability preferences of the producers or consumers depending on their lobby power and their stability preferences. If the consumers have a more powerful lobby group compared to the producers and if the consumers care more about stable food prices, the government will set the optimal price more towards the North-West on the trade-off line. This is represented by the second arrow in Figure 1.

The fourth term consists of a direct lobbying effect of demand and supply reactions on price distortions (factor E) which can be reinforced or weakened due to the budgetary effects of the price policy of the government (factor $C \cdot F$). This is represented by a shift of the trade-off line to the left (see Arrow 3 in Figure 1).

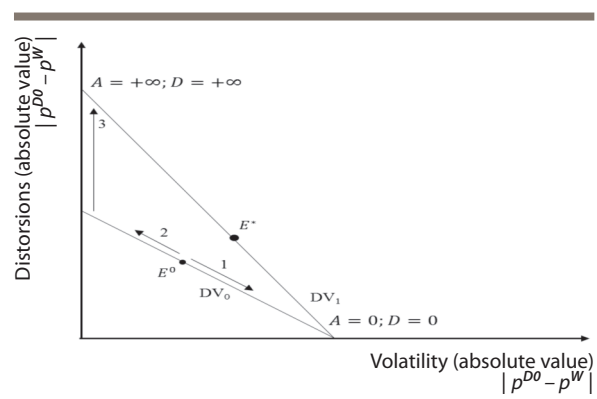


Figure 1: Optimal combinations in a political framework of volatility and distortions

Empirical Results

Even when explicitly taking into account the trade-off between distortions and volatility, many policy distortions do not seem to be consistent with minimizing volatility on domestic markets. As we have shown in the previous subsection, the political economy factors, demand and supply effects and budgetary effects of the government policy may induce government to set prices away from the original trade-off line. To get a feeling about the importance of these potential factors, we first do a simple graphical analysis and later perform a regression analysis. Our results show that the inefficiency of the actual government policy is correlated with the ex-ante policy distortions (which is a proxy for consumer and producer lobby power). However, the results also show that a part of the inefficiency can be explained by measurement error in our distortion indicator.

► Conclusion

In this paper we developed a political economy model to derive how much distortions a government would introduce when it cares about stability in a situation with limited policy options. We showed that there is a trade-off between volatility and distortions in situations with limited policy options for politically optimizing governments; and we identified the optimal combinations of distortions and stability for given inter-

national price shocks and various preferences. Our political model identifies reasons for being removed from the optimal DV trade-off line. We present empirical evidence which is generally consistent with these hypotheses and find that a low policy efficiency during the price spikes is correlated with ex-ante policy distortions.

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