AN ANALYSIS OF THE ROMANIAN AGRICULTURAL MARKET IN THE CONTEXT OF COMMON AGRICULTURAL POLICY

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Abstract

The Romanian economy has experienced significant challenges after its European Union (EU) integration in January 2007. Considering the significance of the agricultural sector in Romania's economy, the implications for this activity have been substantial, especially in the framework imposed by the Common Agricultural Policy (CAP) and its recent reforms. The process of adapting the internal agricultural markets to the requirements of the EU community determined Romania to completely reshape its internal supporting instruments. The purpose of this paper is to analyze the effects of CAP mechanisms on Romanian agriculture from the viewpoint of its market configurations, highlighting the impact on price volatility. The results emphasize the need for investments in this sector – through the absorption of EU and state funds, banking products and other alternatives – investments that could contribute to increased productivity, better results and, in time, lower import levels.

Keywords: *price volatility, price risk, agricultural markets, Romanian market, Common Agricultural Policy.*

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INTRODUCTION

When analysing the agricultural markets, the topic of price volatility becomes one of strategic importance, both at private and governmental level, as concerns about food and energy security, combined with the latest commodity market turmoil, in a context deeply marked by the recent economic crisis, have brought agricultural markets again into the debates of both political and academic spheres worldwide.

Confronted with the structural imperfections of agricultural markets and their profoundly strategic nature in assuring food security, governments formulate and implement consistent regulatory policies whose international coordination is a *sine qua non* condition for stabilizing these markets. However, the turbulences on commodity markets often generate policy responses (export restrictions, domestic price controls) that sometimes exacerbate rather than mitigate the price instability. Due to the EU's key role in the global economy, the consequences of its decisions and the policies implemented are reflected not only domestically but also on the world market. Therefore, the CAP plays a crucial role in the transmission mechanism of price volatility of agricultural products primarily inside the Member States' markets. Accordingly, regarding Romania, as a consequence of the transformation processes undergone in the recent decades, its sensitivity to external shocks has increased, adding new pressures to those caused by internal turmoil and deepening the context of risk to which its economic actors are exposed. Moreover, the CAP and its relationship with agricultural price volatility is an important topic, as for decades the measures taken by EU led to distortions on the international markets.

The purpose of this paper is to analyze the effects of CAP mechanisms on Romanian agriculture, highlighting its impact on price volatility. The remainder of this paper is structured as follows. Section two presents the CAP's implications for price volatility, offering both a literature review and empirical support for the aspects expressed. Section three analyzes the Romanian agricultural market's present outlook based on empirical researches previously conducted and on relevant data. The last section offers the conclusions of the investigation, aiming at formulating some policy implications and recommendations for the participants at economic life exposed to an increasingly competitive environment after the EU integration.

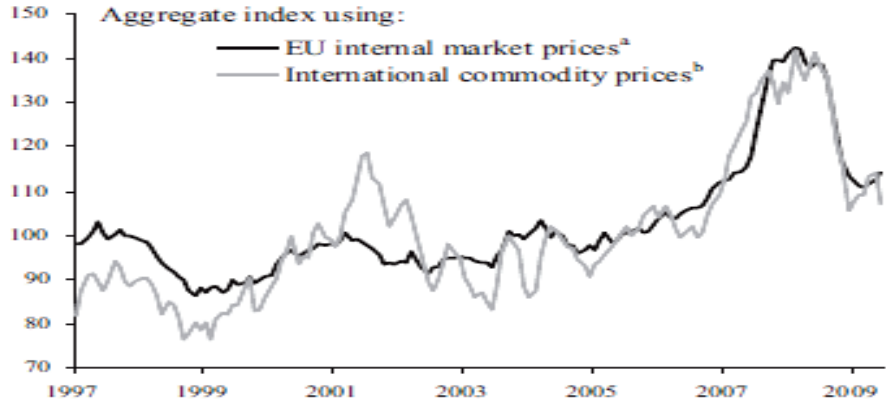
THE COMMON AGRICULTURAL POLICY'S IMPLICATIONS FOR PRICE VOLATILITY – LITERATUREREVIEW AND EMPIRICAL SUPPORT

The turmoil from the first decade of the new millennium, culminating in the recent economic crisis, has offered new connotations to the phenomenon of price volatility. The significant increase in volatility sparked many debates (Balcombe, 2011; FAO, 2011; Huchet-Bourdon, 2011) about its generating factors, the implications in terms of risk exposure of economic actors, but also the need for reconfiguring regulatory policy frameworks. Although the main causes of price fluctuations are complex and impossible to express exhaustively, the researches in the field (Piot-Lepetit&M'Barek, 2011) mostly support the impact of three factors: the specific characteristics of agricultural markets (low elasticity of demand and supply), geopolitical tensions existing on international markets and, last but not least, the reduced effectiveness of an international system of governance in the management of this instability. The unstable global environment revealed an insufficient coordination necessary to prevent accumulation of macroeconomic and fiscal imbalances in European countries. Agricultural markets of the Member States have experienced significant price fluctuations. Some studies have reported the role of CAP in the transmission mechanism of price volatility (Bardarji et al., 2011), opening the context for analyzing the good governance of this policy.

The CAP clusters the entire legislative framework regarding agriculture and rural development in the EU, consisting of a system of agricultural subsidies and programs. Its primary objectives are to increase agricultural productivity and to ensure a fair standard of living for agricultural producers, while stabilizing markets and guaranteeing availability of food supplies at reasonable prices to consumers (Ferrucci et al.; 2012, 188). Over the years, it operated with several types of intervention mechanisms influencing prices and the quantities of agricultural commodities within the EU: direct subsidy payments, price support mechanisms, guaranteed minimum prices, tariffs and quotas on imports from outside the EU, etc. These mechanisms influenced substantially the price stability on the EU market over the decades. However, the reformatory waves that the policy underwent over the years have reshaped its mechanisms and its impact. Consequently, the shift towards a greater market orientation has exposed European farmers to higher market volatility, making them more susceptible to

changes in the macroeconomic outlook. As a result of this trade openness, the instability on world commodity markets is passing through more prominently to the EU markets (Tothova& Velazquez; 2012). The empirical investigations have shown that, historically, international commodity prices were generally more volatile than EU internal prices. The graph in Figure 1, illustrating the evolution of food commodity price indices on the EU and international market, emphasizes the instability of the international prices compared to the EU ones.

Figure 1. Food Commodity Price Indices – EU and International Market (2005=100)



Source: Ferrucci et al.; 2012, 191.

As shown in Figure 1, before 2005, international commodity prices were generally below CAP intervention prices, supporting the idea that the relative stability of EU prices could represent a side-effect of CAP. However, as international commodity prices gradually crossed EU intervention prices from 2006 onwards, due to the commodity price shock that troubled the world economy, the two series commenced to move in synchrony, emphasizing that CAP provides a price stabilization mechanism mainly against price falls (Ferrucci et al.; 2012, 191).

The higher volatility context for internal EU markets opened significant debates in the economic literature regarding causes, correlations and implications. Due to the high importance of the subject, several studies concentrated upon the problem of policy implication for domestic price volatility. Tothova and Velazquez (2012) analyzed the EU market and compared its price volatility developments with the international markets, showing that as market environment is changing, policy is adjusting. They also presented instruments avail-

able to deal with volatility, indicating advantages and disadvantages based on implementation experience. Cantore (2012) analyzed the effects of CAP (both existing measures and proposed changes after 2013) on price volatility in developing countries, finding that existing protectionist measures may continue to exacerbate price volatility at world level and arguing that the abolition of CAP instruments will help stabilize prices in world commodity markets. The literature on the matter also concentrates on analyzing policy instruments designed to deal with the volatility, as the CAP has always had the declared objective of stabilizing agricultural markets, even though the policy mix in place has been regularly adapted over the last decades in line with a changing economic, social and political environment (Tothova& Velazquez; 2012, 9).Among the most representative instruments, a special role has been played by the price support mechanism. For decades, guaranteed institutional prices represented the most important instrument of support for EU farmers, keeping domestic prices relatively high and stable in comparison to those on the international market. Correlated with border protection, the price support offered shelter against competition from imports, ensuring market isolation and thus defence from external shocks. As the high prices caused production increases, expensive public interventions for withdrawing excess quantities or substantial export subsidies were necessary, eventually culminating in budgetary crises. Thus, the various reforms undergone by CAP concentrated on emphasizing competitiveness and market orientation, by shifting support from product to producer through decoupled payments. Intervention prices were progressively reduced and aligned to world prices, public intervention today representing a targeted product safety-net, with institutional prices set at a level that ensures they are used only in times of real crisis.

ANALYSIS OF THE ROMANIAN AGRICULTURAL MARKET'S PRESENT OUTLOOK –RELEVANT DATA AND INTERPRETATIONS

When approaching the problem of agriculture's role for domestic markets, it is elemental to emphasize that a fundamental pre-condition for sustainable development and growth resides in the capacity of a country to grow or to buy food at affordable prices. Certainly, price volatility in domestic markets is strongly dependent upon the policy environment. To stabilize internal markets

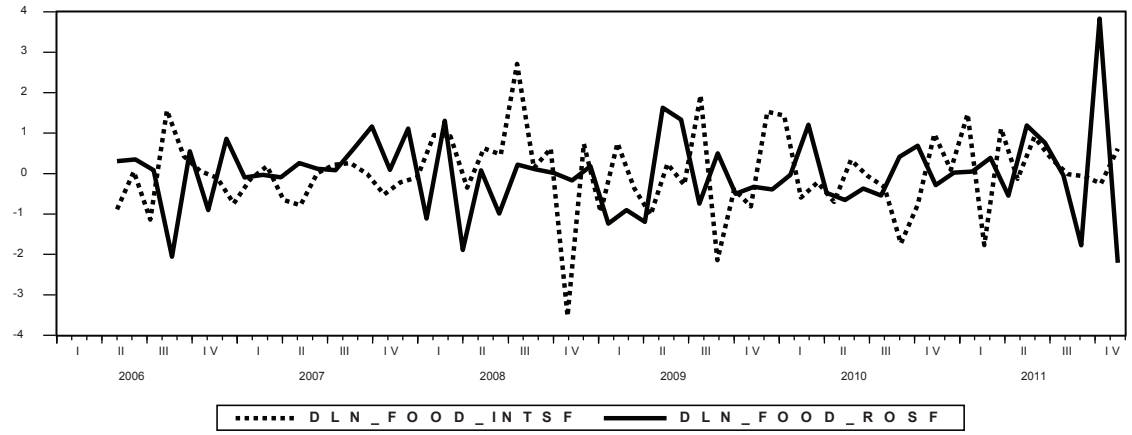
and to protect producers and consumers, governments tend to implement measures that cause the export of the internal instability to international markets. This tendency acts as a vicious circle because as world markets become more volatile, governments seek to stabilize domestic markets even more, thus augmenting the instability. International price trends are transmitted to domestic markets depending on the relative share of domestic demand satisfied by imports (Blein& Longo; 2009, 4).

Empirical analyses(Blein& Longo; 2009) comparing price volatility on domestic and international markets for the previous decade generally show that the volatility of domestic prices is greater if compared to the volatility of international prices, exception being 2004-2008, during which global price volatility proved to be higher. This feature confirms the incomplete transmission of price movements and a partial disconnection of domestic price trends from international markets. These results are confirmed also for the Romanian market, by empirical studies made recently by Pop et al. (2013) for some representative crops and for sugar, and by Pop et al. (2014) for agricultural food commodities. However, the domestic degree of volatility often appears to be highly influenced by the internal context of an economy, by its policy coherence and the strength of its internal market structures. This is mainly the case of Romania's agricultural price stability, highly determined by both its internal context and its position as a new Member State of the EU.

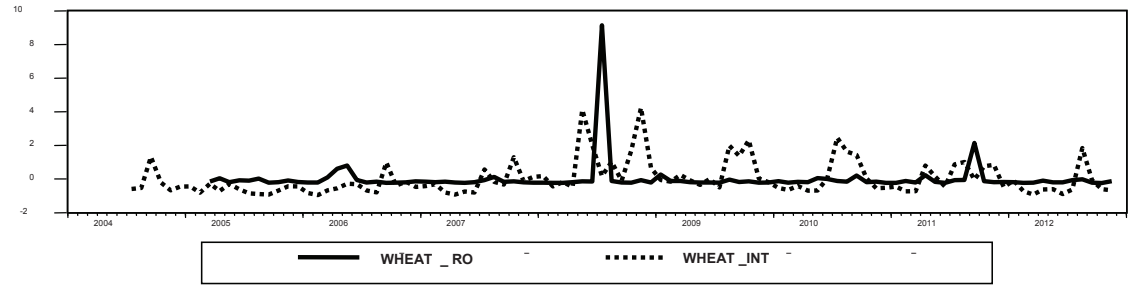
Pop et al. (2013, 2014) conducted extensive empirical researches on the Romanian agricultural market from the price volatility perspective, in order to illustrate the price volatility recently experienced by some representative agricultural commodities for the Romanian economy (an aggregate index of agricultural food commodities, and price indexes for wheat, maize and sugar) and to compare it with the situation registered on the international market. The analyses were based on econometric modelling using the GARCH models to estimate the models for each variable. Combined models ARIMA-EGARCH with a GED distribution were selected. Based on the estimated equations, the series of conditional volatility were generated, in order to compare the instability for the Romanian and international market. The illustration of the results is given in Figure 2, performed in Eviews 7.1, based on data released by the Romanian National Institute of Statistics (RNIS) and the International Monetary Fund (IMF).

Figure 2. Comparison between Domestic and International Price Volatility for Some Representative Agricultural Commodities for Romania, Monthly Data (2004=100)

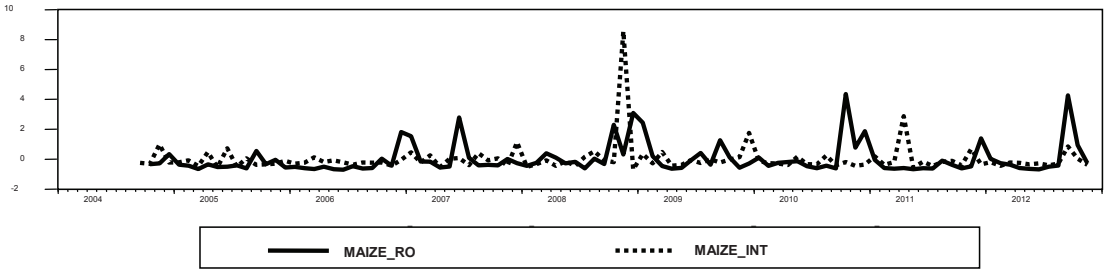
(a) Food – Merged Graphs of Variances – Romanian and International Market



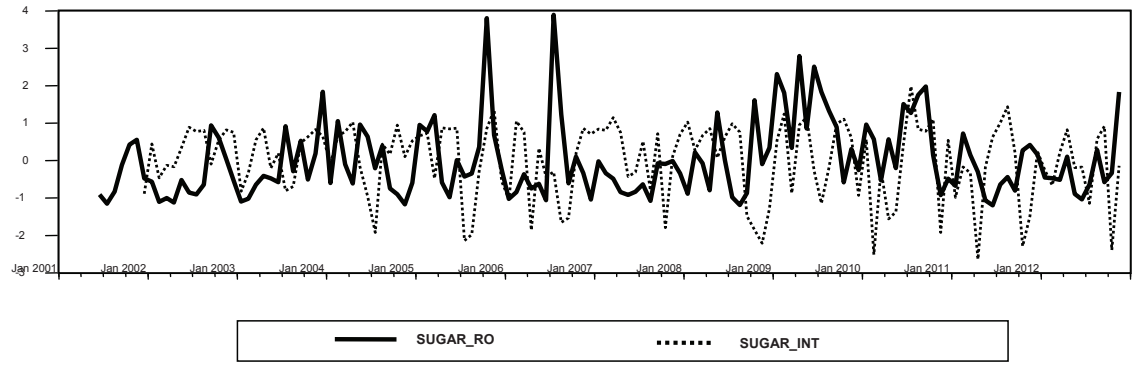
(b) Wheat – Merged Graphs of Variances – Romanian and International Market



(c) Maize – Merged Graphs of Variances – Romanian and International Market



(d) Sugar – Merged Graphs of Variances – Romanian and International Market



Sources: Pop et al.; 2013 (a), Pop et al.; 2013 (b), Pop et al.; 2014.

Examining the results, there are some descriptions regarding price volatility that can be made for the agricultural market in Romania. The analyzed price series experienced significant volatility in the last decade, but they experienced it in a different manner. The wheat market has been characterized by a lower but permanent volatility, combined with very acute spikes in moments of significant turmoil at international level (e.g. in 2008 in the midst of the economic crisis or in 2011 during the Euro Area turmoil). After 2007, these spikes appeared with a lag of two-three months after the international wheat market experienced a significant fluctuation. For maize, it can be noticed a permanent higher level of volatility, but the spikes do not reach such soaring levels. For sugar, in the two years prior to EU accession, the Romanian market experienced periods of significant volatility, much more acute than the ones registered on the world market. In 2008 and especially in 2009, there has been an increase in volatility on the Romanian market. Though at the beginning of 2010 the volatility seems more attenuated, the spring and summer of 2010 brought new volatility peaks in correlation with the ones signalized on the world market. Therefore, for all products it can be detected a mix of imported and domestic volatility. Analyzing the equations for the Romanian market, it can be observed that the current volatility depends more on passed shocks than on passed volatility. Thus, the current volatility has its origins on the shocks and transformations Romanian agricultural sector experienced in the recent period (Pop et al.; 2013, 2014).

Since 2007, when Romania has joined EU, both its government and its economic actors are struggling to adapt to the new competitive environment. Romania's entry into the EU changed the character of European agriculture, but also the EU is in the process of changing the character of Romanian agriculture

(Knight; 2010, 6). In its rural area, Romania has approximately 14.7 million hectares of agricultural land, incorporating over four million farms. Compared to the other Member States, Romania represents the country most heavily reliant on agriculture and the country with the largest number of farmers in the union as a whole, the Romanian farmers representing 20% of the entire EU labour force involved in agriculture (Alboiu; 2009). Contrasting with most EU countries, Romanian farmers are divided into a peasant and an industrial class, having 2.6 million farms which are under a hectare, and only 9,600 farms which are more than 100 hectares. Until now, those 9,600 farms absorbed the most significant portion of agricultural subsidies within the CAP (Luca &Ghinea; 2009). Also in terms of economic size of farms, Romanian family farms are quite small compared to their Western equivalents, in Romania the average size of the family farm is 2.2 hectares, much smaller than the Western European ones. From the over 4 million family farms, only 1.24 million are at least 1 European Standard Unit (ESU) and 98% of all Romanian farms are less than 8 ESU (Alexandri& Luca; 2008, 3). Consequently, when compared with the Romanian situation, it can be observed that most Member States of the EU have developed on completely different paths, and consequently the policies formulated under the common framework often do not resonate with the Romanian realities.

CONCLUSIONS, POLICY IMPLICATIONS AND RECOMMENDATIONS

Due to the European Union's decisive role in the global economy, the consequences of its decisions and the policies implemented are reflected not only domestically but also on the world market. Therefore, the CAP plays a key role in the transmission mechanism of price volatility of agricultural products. The EU precedent experience of implementing mechanisms to stabilize the markets using price controls has proved inadequate to today's context, putting the EU in the position of reshaping its common agricultural framework. However, the recent troubled economic environment emphasized the need to maintain income support and to reinforce instruments to better manage risks and respond to crises. The current CAP offers viable mechanisms for price volatility, product safety-nets and decoupled payments contributing to make farms less vulnerable to fluctuations in prices and to provide an income safety net independent of the

market situation (Tothova& Velazquez, 2012). Still, these instruments need to be adjusted to achieve market stability on the medium-term perspective, in the most effective and efficient way.

With regard to Romania, its current volatility context is a mixture between imported volatility, internal instability and lack of maturity of the market structures. Romania should concentrate on strengthening its internal potential of production in order to reduce the level of imported volatility, while also dealing with the problem through price risk management strategies. The Romanian producers are adapting with high difficulty to a highly volatile market environment. Investments in this sector – through the absorption of EU and state funds, banking products and other alternatives– could contribute to increased productivity, better internal results and, in time, lower import levels. When comparing the Romanian situation with other Member States, it can be observed that most Member States of the EU have developed on completely different paths, and consequently the policies formulated under the common agricultural framework often do not resonate with the Romanian realities. To meet Romania's perspectives, the CAP would need to undergo fundamental changes or Romania's agricultural outlook should transform dramatically. During the process of formulation of the latest CAP reform – the Ciolos reform from 2013, when for the first time in the history of major CAP reforms Romania participated as a member, it supported the maintenance of CAP on its present path. Still, Romania must proceed as a more dynamic player in the CAP debates, in order to support its distinctive status and to negotiate regulations that fit more its internal agricultural outlook.

References

Alboiu, C.(2009). Subsistence Agriculture in Romania – a Modus Vivendi? 111 EAAE-IAAE Seminar 'Small Farms: decline or persistence' University of Kent, Canterbury, UK (June 26-27).

Alexandri, C. & Luca, L. (2008). The Impact of CAP Reform on Romanian Agriculture, Paper prepared for the 109th EAAE Seminar "The CAP after the Fischler Reform: National Implementations, Impact Assessment and the Agenda for Future Reforms", Viterbo, Italy (November 20-21).

Balcombe, K. (2011). The nature and determinants of volatility in agricultural prices: an empirical study. In Prakash, A. (ed), Safeguarding Food Security in Volatile Global Markets. Rome: FAO, 85-106.

Bardaji, M., Garrido, A., Iglesias, E. et al. (2011). What market measures in the future CAP after 2013? www.europarl.europa.eu/studies(accessed 28-01-2015).

Blein, R. & Longo, R. (2009). Food price volatility – how to help smallholder farmers manage risk and uncertainty, Discussion paper prepared for the Round Table of 32nd session of IFAD's Governing Council (February 18).

Cantore, N. (2012), Impact of the Common Agricultural Policy on food price volatility for developing countries. Overseas Development Institute, London, UK.

Food and Agricultural Organization (2011). Price Volatility in Food and Agricultural Markets: Policy Responses, Rome and Paris: FAO and OECD.

Ferrucci, G., Jimenez-Rodríguez, R. &Onorante, L. (2012). Food Price Pass-through in the Euro Area: Non-linearities and the Role of the Common Agricultural Policy. International Journal of Central Banking, 8(1): 179-217.

Huchet-Bourdon, M. (2011).Agricultural Commodity Price Volatility: An Overview, OECD Food, Agriculture and Fisheries Papers, No. 52, OECD Publishing.

Knight, D.K. (2010).Romania and the Common Agricultural Policy: The Future of Small Sclae Romanian Farming in Europe,EcoRuralis.

Luca, L. &Ghinea, C.(2009).Two Extremes Don't Make One Right: Romania and the Reform of the CAP of the EU, Romanian Centre for European Polices (July).

Piot-Lepetit, I., &M'Barek, R. (2011).Methods to Analyse Agricultural Commodity Price Volatility.In I. Piot-Lepetit& R. M'Barek (Eds.), Methods to Analyse Agricultural Commodity Price Volatility, Springer, New York.

Pop, L.N., Rovinaru, F. &Rovinaru, M. (2013) (a). Assessing the Price Risk on the Romanian Agricultural Market: Analyses and Implications, Interdisciplinary Management Research IX: 469- 479, Opatija: J.J. Strossmayer University Osijek, HochschulePforyheim University, Croatia.

Pop, L.N., Rovinaru, M. &Rovinaru, F. (2013) (b). The Challenges of the Sugar Market: An Assessment from the Price Volatility Perspective and Its Implications for Romania, Elsevier Procedia Economics and Finance, 5, 605-614.

Pop, L.N., Rovinaru F. &Rovinaru M. (2014). Commodity Price Volatility During and After the Economic Crisis – Implications for Romania, South East European Journal of Economics and Business, 8(1), 40-47.

Tothova, M. & Velasquez, B. (2012). Issues and policy solutions to commodity price volatility in the European Union. Paper presented to the 2nd IFAMA annual symposium: The road to 2050, the China Factor, Shanghai.