

## ASSESSING THE GOVERNANCE FOR COMMODITY PRICE STABILIZATION – A RETROSPECTIVE LOOK

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**Abstract:** *The volatility of commodity prices has become once again a matter of profound and controversial debates for both political and academic spheres worldwide in the framework of the global economy severely distressed by the recent economic turbulences. Although commodity markets were already notorious for their price instability, the events the world economy experienced in the years 2000s offered new connotations to this phenomenon. In the first decade of this millennium, the commodity markets have struggled with high volatility, with prices reaching historical peaks just to crash dramatically some months later and very soon to restart their rise. The significant increase in volatility generated many debates about its triggering factors, the implications in terms of risk exposure of economic actors, but also the need for reconfiguring regulatory policy frameworks. The quest for the most appropriate means to deal with commodity price turbulences has known different stages over the years. Decision makers worldwide have sought alternatives, formulated and tested various mechanisms whose central aim was to mitigate price fluctuations. 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 that sometimes exacerbate rather than mitigate the price instability. The purpose of this paper is to assess the subject of governance regarding commodity price stabilization, offering a retrospective look at the mechanisms implemented over the years, with a central focus on the International Commodity Agreements – instruments through which in the previous decades the producer and consumer governments worldwide pursued price stabilization for some key commodities like sugar, coffee, cocoa, tin and natural rubber. After analyzing the effectiveness of the International Agreements and debating their reason for failure and the lessons learned, the paper approaches the shift towards a different paradigm imposed by the current context of a globalized world economy where all actions and policies aim for market liberalization. As the price volatility is rarely the outcome of a singular cause, the results of the present paper suggest that combined solutions – public intervention and market-based – must be formulated in order to effectively tackle the problem of price instability.*

**Keywords:** price volatility; commodity markets; international agreements; governance for price stabilization; public intervention mechanisms; market-based mechanisms.

**JEL classification:** E31; E65; F42; Q02.

### 1. Introduction

The concerns regarding food and energy security, joint with the latest commodity market turmoil, in a context severely troubled by the recent global crisis and the sovereign debt crises, have brought commodity markets again into the debates of both political and academic spheres worldwide, offering new connotations to the price volatility phenomenon. The significant volatility increase generated many debates about its triggering factors, the

implications in terms of risk exposure of economic actors, but also the need for reconfiguring regulatory policy frameworks.

Price instability arises from three broad sources, namely (Galteir, 2009): natural instability (price fluctuations related to supply changes as a result of natural disasters affecting production); imported instability (price fluctuations related to price changes on correlated markets, fluctuations in exchange rates or in transportation costs); and endogenous instability (price fluctuations related to market functionality itself, like erroneous expectations, speculative bubbles, panic reactions). Though the main causes of price fluctuations are complex and impossible to express exhaustively, the researches (Piot-Lepetit and M'Barek, 2011) support the impact of three major factors: the specific characteristics of commodity markets, geopolitical tensions on international markets and the reduced effectiveness of an international system of governance in the management of this instability. All governments formulate and implement consistent regulatory policies whose international coordination is a condition for stabilizing markets. The history of governmental intervention on commodity markets is a complex one, dating at least since 1930s, when the international community started to search for mechanisms to tackle the consequences of the Great Depression. During the next decades, various international commodity agreements with economic provisions (price bands, stockholding, supply controls) were established with the stated objective of stabilizing prices (Gilbert, 2011). But these agreements proved to be unable to adapt to market changes, hence, by late 1990s, the economic clauses stipulated in them failed, victims of the political or economic context of the time. Since the problem of commodity price instability continued, the decision makers worldwide have continued their quest for alternatives.

The purpose of this paper is to assess the topic of governance for commodity price stabilization, offering a retrospective look at the mechanisms implemented over the years, with an accent on International Commodity Agreements, analyzing their effectiveness, while also approaching the shift towards a different paradigm imposed by the current context of a globalized economy where all actions and policies aim for market liberalization. The reminder of the paper is structured as follows. Section two offers a retrospective look at the mechanisms of price stabilization through public intervention, focusing on analyzing the effectiveness of International Commodity Agreements, based on a literature review and empirical investigations. Section three presents the transformation of the paradigm of addressing the price stabilization problem, while Section four finalizes the paper offering some conclusions and policy implications.

## **2. Retrospective Look at the Mechanisms of Price Stabilization**

### **2.1. An Overview of the Major Public Intervention Mechanisms**

The search for the optimum mechanism to stabilize prices on the world market has experienced, so far, two major stages of development:

- I. The quest of "The New International Economic Order" through international agreements for commodities, from the 1930s until the late 1970s;
- II. The search for liberal solutions through risk management instruments, since the 1980s onward.

A retrospective look at the price control mechanisms meant to ensure the stability of income for domestic producers led to the identification of several trends that occurred throughout history. For example, in respect to agricultural commodities, interventionist and protectionist measures have a long and controversial history that can be divided into three major waves (UNCTAD, 2003: 30):

- The first protectionist wave was initiated by the European countries and directed against the new territories of North America and Oceania, cereal, dairy and meat producers, in a context amplified by the revolution in transport and freezing techniques that took place in the late nineteenth century. These events formed the construction basis for what became, decades after, the European Union's Common Agricultural Policy.
- The second wave occurred in the interwar period in which both the exporting and importing countries have adopted and intensified interventionist policies and manifestations of economic nationalism.
- The third wave is associated with the period following the Second World War, being the result of several factors, as: the problems of post-war reconstruction and the difficulties in the balance of payments of the Western European states; the deepening of governmental implications in combating the disadvantages associated with low income levels for the population; notions of distributive justice for the agricultural sector, unable to capture the benefits but forced to bear the cost of technological development; the formation of regional economic groupings etc.

While developed countries were in a position to establish and implement its interventionist measures to support domestic producers, low-income countries, because of fiscal constraints, were unable to provide financial support, the gravity of their situation being directly determined by their degree of dependence on incomes generated by commodity exports. The assessment of this problem in the international arena began after the Second World War with the negotiations which materialized in the *Havana Charter* (1948), document that however remained unratified, but whose directions were to influence future international negotiations.

Moreover, the instability of commodity prices deepened in the early 1970s, caused by the replacement of the fixed exchange rate system with a flexible one. Also the emergence of derivatives and other financial instruments determined an increase in the speculative activities in the financial and commodity markets, generating supplementary pressure on market fundamentals and consequently additional volatility. After the recession of early 1980s, the IMF and the World Bank introduced Structural Adjustment and Stabilization Programs, putting the burden of change further on deficit countries (Shafaeddin, 2011; Mihut, 2015).

Confronted with such a challenging environment in which the triggering factors for commodity price instability were so numerous, since 1950, many governments have taken the commitment to manage commodity markets through international agreements. Under the auspices of the United Nations the producing and consuming countries signed five international commodity agreements:

- International Sugar Agreement (1954);
- International Tin Agreement (1954);
- International Coffee Agreement (1962);
- International Cocoa Agreement (1972);
- International Natural Rubber Agreement (1980).

The major guiding principles underlying the formulation of these agreements include the following provisions (Gayi, 2004: 3):

- The intervention through intergovernmental actions should be an exception required by severe disturbances, and not a trading norm.
- Both producers and consumers, represented in equal proportions, must take part in the agreements signed.

The major concern that led to the signing of the first two agreements, for sugar and for tin, was related to the risk of recording low prices, such as those registered in 1930, generated by a surplus of supply. The main instrument applied in both agreements was the management of supply through export quotas, while in the Tin Agreement buffer stocks

were also implemented. For the Cocoa and Rubber Agreements the buffer stock was the most important instrument, while the Coffee Agreement operated entirely based on supply control mechanisms (Gilbert, 1995). Table 1 summarizes the basic features of the five agreements, stressing for each of them the main data and the types of arrangements under which they operated.

Table 1: The characteristics of International Commodity Agreements

	<b>Sugar</b>	<b>Tin</b>	<b>Coffee</b>	<b>Cocoa</b>	<b>Natural Rubber</b>
Date of first agreement	1954	1954	1962	1972	1980
Agreements with economic clauses*	4	6	4	4	3
Last agreement with economic clauses*	1978	1982	1983	1987	1996
Economic clauses	Lapsed in 1983	Collapsed in 1985	Suspended in 1989	Suspended in 1988	Suspended in 1999
Buffer stocks:	no	yes	no	yes	yes
- Upper limit	–	+15%	–	+23.1%	+28.6%
- Lower limit	–	-15%	–	- 23.1%	- 25.2%
Export controls	yes	yes	yes	no	no

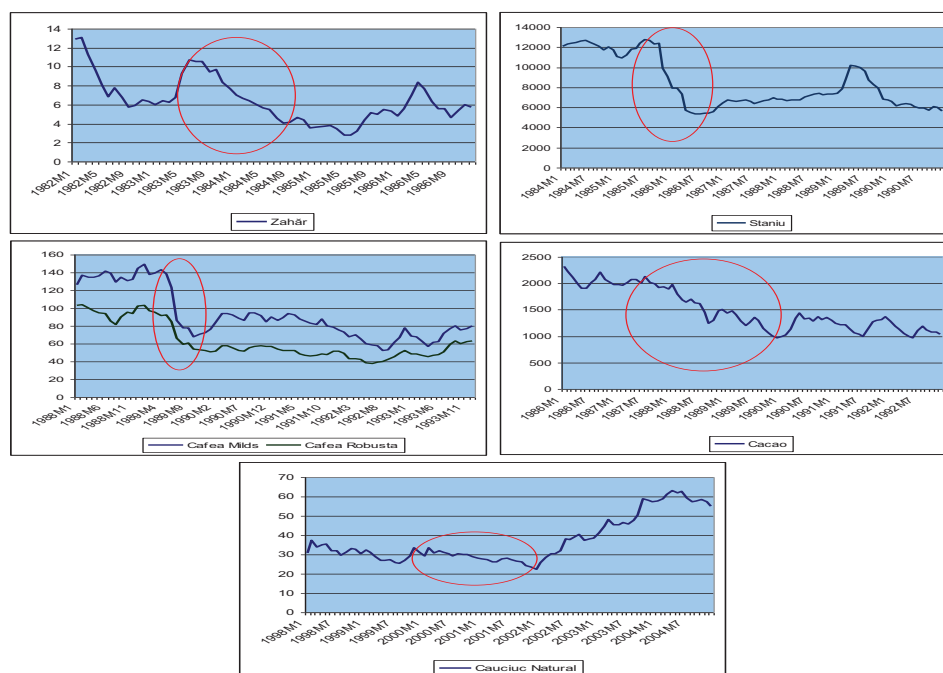
\*Note: The agreements concluded after the date specified in the table eliminated the price stabilization clauses. Thus, currently they have the main role of improving the information flow on the market of that specific product.

Source: Gilbert (1995); International Coffee Organization; International Cocoa Organization; International Sugar Organization, etc.

The difference between stabilization implying export controls and that implying buffer stock can be found in the financial implications of each practice and in the partaker on which the burden of stock holding falls. In export control agreements, the costs of stabilization fall on producers and producer governments which have the incentive to reduce future production, while in buffer stock agreements producers are not interested to reduce production (Gilbert, 2011: 214-215). Nevertheless, despite their rigorous mechanisms, the agreements generated several controversies on the international scene, since many governments from developed countries considered price stabilization to be an expensive deviation of funds from more important development goals. Thus, these agreements proved to be unable to adapt to market changes, hence, by late 1990s, the economic clauses stipulated in them failed, victims of the political or economic context of the time.

## 2.2 Analyzing the Effectiveness of International Commodity Agreements – Literature Review and Empirical Support

Many debates in the literature (Gilbert (1995), Plantos and Larson (1996), Viton (2004)) were focused towards establishing the effectiveness of these agreements. The extent to which they raised and stabilized prices remains controversial. An investigation of existing empirical analyses and own calculations made on available price series led to the conclusion that all these intervention schemes, some more effective than others, generated only a short-term impact on prices. The graphs in Figure 1 capture the evolution of commodity prices in the years immediately following the termination of agreements by which they were governed.



**Figure 1:** Price developments in the years following the agreements' termination.  
Note: The order of the commodities in the graph is the following: (1) Sugar; (2) Tin; (3) Coffee; (4) Cocoa; (5) Natural Rubber.  
Source: Author's elaboration based on data released by IMF.

In order to emphasize this aspect more clearly, Table 2 presents the levels recorded by price indices of the analyzed commodities in the years immediately following the termination of the agreements.

**Table 2:** Price indices in the years immediately following the suspension / collapse of the agreements

	Year -1 (prior to termination)	Year 0 (termination)	Year1	Year2	Year3	Year4	Year5
Sugar	100%	54.9%	63.5%	33.8%	42.1%	56.2%	58.0%
Tin	100%	61.2%	57.3%	50.2%	59.7%	49.1%	44.0%
Coffee	100%	66.3%	69.0%	60.2%	56.0%	75.3%	135.5%
Cocoa	100%	64.7%	52.4%	59.0%	57.0%	53.4%	55.0%
Rubber	100%	88.0%	92.5%	79.6%	106.0%	141.4%	170.3%

Note: The price indices calculated based on the year preceding the termination of the last agreement that stipulated economic clauses.

Source: Gilbert (1995) and author's calculations based on data released by IMF.

As it can be seen from the graphs in Figure 1 and the numerical values in Table 2, for some products, the price collapses registered after the exits from the parameters imposed by the agreements were more substantial (as in the case of sugar and tin), while for others the drops were lower (as for natural rubber). But in all cases there has been registered a decrease in prices, and within a five years horizon, the prices did not return to the levels covered by the agreements, except for natural rubber. This aspect supports the rationale that the Agreements acted in the direction of increasing prices and managed to do that by a substantial amount. The investigation of the literature (Gilbert, 2011) shows that the price decline after the Agreements' failure may have been related to other market developments,

different from the ones that characterized the intervention period (increase of supply caused by the release of stocks previously held by the buffer stock or export controls, or increase of supply determined by the arrival of major new exporters in the international market arena). Still, with an average of about 30 percent lower post-intervention prices than under the Agreements' stipulations, there is empirical evidence to support the fact that the Agreements determined price increase.

With regard to price stabilization, an assessment of the past experience suggests that the Agreements had limited accomplishment in reducing price volatility, partly due to the fact that they did not have effective mechanisms for dealing with abrupt changes, as long as the producers were not interested in exporting beyond what was profitable, and buffer stocks sold only what it was previously bought. Consequently, the empirical analyses on the matter (Gilbert, 2011) brought limited evidence that the ending of the Agreements resulted in higher price instability.

### **2.3. The International Commodity Agreements – Motivations for Failure and Lessons Learned**

A wide range of reasons for the failure or inability to further negotiate the Agreements were set, the most representative including the following central ideas (Anderson and Gilbert, 1988; Gilbert, 1995; Calo, 2005; Gilbert, 2011):

- difficulties with attempts to influence prices through output management methods in a context of increasing productivity and supply and emergence of new producers (e.g. Vietnam for coffee);
- difficulties in agreeing on the price oscillation interval considered fair to producers, as well as difficulties in accurately determining the long-term price trend around which stabilization should occur;
- problems in coordinating the interests of signatory parts: conflict between Southern producer states requiring price support and stability and Northern consumer states claiming simple price stabilization (divergence that led to the collapse of the Cocoa and Coffee Agreements);
- the principles of free market determined consumer states to act towards obstructing the negotiations and eventually to seek withdraw.

Opinions (Gilbert, 1996) were issued regarding the idea that all these obstacles could have been overcome if there was enough motivation at the political level, backed by sufficient financial resources to enable the implementation of these agreements. Examples of viable functional arrangements, such as OPEC for oil or DeBeers for diamonds, have managed, despite turmoil, to keep for long periods the price variation within certain limits. The lack of political support is also illustrated by the fact that in the Agreements' history, only that of tin collapsed in 1985 after a successful period of over twenty years, the others failing for various reasons:



- Sugar – adverse market conditions made unviable stabilization attempts;
- Cocoa – lack of funds to support effective intervention from the stabilizing authority; lack of support from the US and the main producer, Ivory Coast, who was not a member of the first three agreements;
- Coffee – though interventions were effective (they raised prices and reduced volatility), concerns appeared regarding the benefits distribution among states, as the high prices did not benefit the producers;
- Natural rubber – negotiation problems related to the necessity to update the band of price fluctuation downward.

A series of lessons can be learned from the experience of these agreements and the reasons that led to their termination / collapse:

- The producers' benefits are not distributed equally among the countries that synchronize their export policies. Big producers were often advantaged by the refusal to join an agreement (Brazil for the Tin Agreement, Ivory Coast in the third Cocoa Agreement, Vietnam for the Coffee Agreement etc.) (Akiyama and Larson, 1994).
- The agreements are outlined based on the market conditions of the time in which they are formulated; thus they are not sufficiently adaptable to the changing markets characteristic of a dynamic world (Gilbert, 1996).
- Precisely the agreements' success in raising prices is what often led to their collapse. Although the decision of negotiation is in the hands of Governments, the choice regarding production levels belongs to farmers, who in the case of high international prices often substantially increased production causing stockpiling and problems in providing financial resources to manage them (Plantos and Larson, 1996).

However, the commodity prices remained highly volatile, often registering levels below those considered fair by the producers from the less developed countries. Thus, after the failure of the Agreements, the producing states have tried to replace the active intervention through unilateral actions organized by associations of producer countries. A model for action was provided by the OPEC, on the structure of which was attempted the foundation of similar associations of producing countries: the Association of Tin Producing Countries in 1986, or the Association of Coffee Producing Countries in 1994. Studies (Gilbert, 1995) have shown, though, that only some of these groupings had significant effects on prices. Nowadays, however, development policies promoted both by international institutions and democratic governments insist on matters related to production efficiency, marketing, or product quality, a radically different approach to the ideology which provided the framework for implementation of mechanisms designed to restrict supply or to impose production quotas. In a more competitive and less centralized global economy, commodity policies no longer represent a manner of income redistribution from consumers to producers.

### **3. The Change of the Paradigm of Addressing the Price Stabilization Problem**

Yet, the problem of commodity price instability continues to cause severe difficulties both for private producers and governments. Therefore, the decision makers worldwide have always sought alternatives, formulated and tested various mechanisms whose central aim was to mitigate price fluctuations. Summarizing the instruments used over the years, we can say that the process of price stabilization has known approaches based on four categories of mechanisms that can be classified and characterized as shown in Table 3:

**Table 3:** Categories of mechanisms used to stabilize prices

Objective Governance	Price Stabilization	Price risk management
	Type A Mechanisms	Type B Mechanisms
Market-based mechanisms	<i>Objective:</i> price stabilization through increased performance of markets. <i>Justification:</i> lower susceptibility to natural disasters, higher price elasticity of supply; compensation of deficits and surpluses among regions (trade tools) and years (storage mechanisms). <i>Examples:</i> storage infrastructure, quality standards, irrigation systems.	<i>Objective:</i> Risk management through market mechanisms. <i>Justification:</i> better possibilities to hedge against price risk and yield risk. <i>Examples:</i> forward, futures, insurances.
	<b>Type C Mechanisms</b> <i>Objective:</i> price stabilization through market intervention. <i>Justification:</i> influencing supply and demand for price control. <i>Examples:</i> interventions in production, trade regulation, governmental stocks.	<b>Type D Mechanisms</b> <i>Objective:</i> households support during crises. <i>Justification:</i> transfer of money or property toward households. <i>Examples:</i> food aid.

Source: Author's elaboration based on information from Galtier (2009).

Since the 1980s, after the failure of the agreements, the next step was the search for liberal solutions through risk management instruments. This new optimal strategy provided a mix of Type B and Type D mechanisms and had as justificatory support the failure of stabilization policies, doubled by theoretical arguments against price stabilization based on the role of price for market information. In practice, this strategy has faced a number of obstacles caused by the underdevelopment of type B instruments at the expected level and by the failure of type D instruments to prevent household capital decline.

In the context of the recent economic turmoil, market analysis determined the formulation of an alternative paradigm that provides a combination of all four categories of mechanisms, in order to take into account the different causes of price volatility. In order to manage the problem of natural price instability, actions for decreasing the supply's sensitivity to natural risks or the increasing of price elasticity must be undertaken. Thus, the answer resides in implementing effective supply structures. About imported instability, it is important to underline that international volatility is transmitted to domestic markets on a degree positively correlated with the country's dependency on imports. Market competitiveness also plays a major role, stressing the importance of governmental intervention through subsidies or trade barriers to shield domestic producers against foreign competition. Regarding endogenous instability, the price expectations of market actors are critical to their choices. Thus, incomplete information regarding market fundamentals can cause destabilizing speculative behaviors. In such a case, efficient futures markets and effective commodity exchanges able to provide sound price discovery mechanisms and proficient risk hedging strategies should be available to mitigate price volatility and its impact.

#### 4. Conclusions and Policy Implications

After the assessment of the Commodity Agreements, their effects and their reasons for failure, it can be concluded that, in situations of political involvement and support from the international community, and a commitment of producers toward the common good, such agreements, properly implemented, would be able to achieve their stability objectives. Yet, this achievement is conditioned by the target prices to be set to reflect long term market



trends. Still, in the current environment when all actions and policies aim for market liberalization, there is no favorable context for the resuscitation of similar control practices. In a globalized economy and a troubled environment, price volatility is rarely the result of a singular cause, thus combined solutions to tackle the problem must be formulated. Available approaches vary from governmental to market-based mechanisms, including instruments designed to reduce production fluctuation, to manage the supply deficit or surplus, to ensure viable risk transfer alternatives or to offer support through subsidies. The implementation of public or market-based tools is determined by the level of involvement of the public or private sector, and effective results require most of the times a joint intervention.

Consequently, the alternative paradigm that currently characterizes the international approach involves choosing the mechanisms in accordance with the causes of volatility. Thus, it requires a shift from risk management towards a structural transformation, from the use of a singular type of instruments to the implementation of a combination of mechanisms, from exclusion towards re-inclusion of public instruments, from using a mechanism in any situation toward a policy approach appropriate to each case of price volatility. Since price volatility represents a very complex phenomenon that can be moderated only up to some extent by adjusting market structures and specifying regulatory policies, each country 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.

## 5. Acknowledgement

This work was cofinanced from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/159/1.5/S/134197 „Performance and excellence in doctoral and postdoctoral research in Romanian economics science domain”.

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