1. Agricultural Market Regulation: Lessons from History and Economic Thought

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Summary

The question of agricultural market regulation has been viewed differently depending on the era, state of economic thinking, and circumstances. Reflecting the fact that economic thinking has always been stimulated by events, here we shall focus on:

a) the issue of food security from ancient times to the 18th century,

b) the issue of international trade during the 19th century, and

c) the issue of market instability in the 20th century, particularly during the Great Depression.

I – Antiquity and the Middle Ages: From the Search for Food Security to the Emergence of the Modern State

The history of societies until the Middle Ages shows us that they have always sought to ensure their food security by relying on collective institutions not driven by the search for profit but rather by the individual interests of family groups or groups of traders.

For instance, in primitive village societies where the market was absent, the village leader or feudal lord was responsible for stocks.

With the appearance of the division of labor between agriculture and cottage industries, the production of individual agricultural surpluses and the market, food security was no longer ensured by the village leader or feudal lord, but rather by hierarchical forms of coordination. In ancient times, the authorities thus implemented public storage policies (Egypt) and agricultural market regulation policies (Athens, Rome). In the Middle Ages, monarchs sought to have sufficient stocks and clean up urban markets. In the 16th century, Thomas More recommended that public stocks correspond to two years of consumption and surplus production, with the surplus exported at low cost.

However, until then, approaches were exclusively pragmatic in nature and aimed to resolve a concrete problem at a given moment in time. It was during the 18th century that the need to understand what was happening and justify public action (or inaction) by an in-depth analysis of the causes behind the phenomena emerged. It was also during this period that "liberalism" emerged—the idea that the selfish pursuit of individual interests could lead to the good of all through trade and the market.

The 18th Century and the Birth of Liberalism

The idea of liberalism found its roots in the English philosophers of "natural law." Relayed by the "Physiocrats," it was then taken up in a very diluted form by Adam Smith.

In regard to the central question of agricultural and food products, the Physiocrats, and notably François Quesnay, recommended eliminating the numerous public storage measures, transport control and diverse regulations, emphasizing their inconveniences but forgetting their advantages. They therefore counted on the well-understood interests of speculators (buy in periods of abundance, sell in periods of shortage) to ensure the inter-annual offsetting of good and bad harvests, as well as on the interests of traders for the geographical offsetting of provinces that had surpluses with those that had shortfalls.

These ideas were fought by a few authors. For instance, Ferdinand Galiani explained the difficulty of developing trade for a product such as wheat, a crucial product that was the same everywhere and produced almost everywhere. Because of production and transportation times, the wheat trade imposed risks that only bankers holding a monopoly could support. Supply and demand could therefore not be regulated by the market alone.

Galiani was not heard. At the end of Louis XV's reign and during the start of Louis XVI's reign, France undertook liberalization several times, but backtracked many times because of the negative consequences of liberalization, notably the Paris uprising of 1775. After the revolutionary period and the first Empire marked by state interventionism, the question re-emerged during the Restoration when the emigrant aristocrats again defended Quesnay's ideas. Cautious, Louis XVIII opted for domestic liberalism but set up a system of variable customs duties at the borders, the "sliding scale" that lasted until Napoleon III.

The 19th Century: The Canonic Form of Liberal Theories and the Difficulties Applying Them

Although the 18th century ended with a posthumous victory for Galiani's analyses, based on the observation of what would later be called "market failings," the question of liberalism returned at the start of the 19th century in England in a different light. The justification was much more rigorous than that given by the Physiocrats and, above all, the question was a new one: should Europe continue to produce all its food or would it not be better to count on more fertile distant lands (notably America) to ensure more efficient production.

In England, Adam Smith, David Ricardo (the beneficial nature of national specialization) and John Stuart Mill (single equilibrium theory) helped build a true economic science. However, their analyses, which led to advocating liberalization, were static; they ignored the phenomena tied to the accumulation of capital, projection errors, and income distribution. What is more, they relied on more or less arbitrary assumptions and

assumed that the market operated properly, which is debatable for agriculture which these authors did not think to treat differently from other economic activities. These authors' influence can be seen in the suppression of the Corn Laws in 1846.

In Germany in the 1840s, Friedrich List defended the need to protect emerging industries from imports, but did not apply this same reasoning to agriculture. The United States did this in the 19th century.

In Europe, generally speaking, the 19th century alternated between periods of liberalism and periods of protectionism, with the proponents of liberalism relying on Ricardo's theories and the proponents of protectionism on pragmatic common sense but, unlike Galiani, without any mention of agriculture's particularities and without challenging the idea that price fluctuations came only from harvest levels and the weather.

Liberalism dominated until the 1870s, but it then became apparent that cheap agricultural imports lead to poverty in the countrysides that were, in this way, no longer able to provide outlets for industry (deflationary spiral). European countries then adopted protectionist agricultural policies (in France, the Méline tariff of 1892).

In regard to sugar, initially produced in the colonies, its production grew in Europe in the 19th century, eventually leading to surpluses and a trade war between countries (export subsidies). This trade war was ended with the first "product agreement" signed in 1901 (a new agreement based on quotas was signed in 1931).

World War I led to an increase in state-controlled economy, but liberalism returned in force during the post-war period.

The 1929 Crash and its Consequences

The causes of the 1929 Crash were numerous, and the agricultural sector was not uninvolved (bank seizures of land impossible to resell).

In the United States, Franklin Roosevelt implemented a supply incentive policy that led to the post-World War II surpluses. This policy was guided by a degree of pragmatism because there was not in reality any new economic theory and the reasons why the market did not work remained a mystery until the elaboration of the cobweb theory by Mordecai Ezekiel.

The "cobweb" is an economic model showing the existence of "endogenous" causes of price fluctuations. It is based on the lapse of time between producers' decisions and the consequences of these decisions (production volumes). The model generates price and quantity measurements that fluctuate, alternating "highs" and "lows." The system can be "convergent" (the oscillations get smaller over time), "periodic" (the oscillations stay the same), or "divergent" (the oscillations get larger). The ratio of slopes to straight lines (hypothesis of "linear" supply and demand curves) determines which of these regimes will apply. For any given supply, a demand that is more "elastic" than the supply will produce a convergent cobweb. It will be periodic if demand is as elastic as supply. When

demand is less elastic than supply, the cobweb will be divergent. This is the case with food products. In reality, various factors prevent the attainment of such results, but the crucial lesson is that, on agricultural markets, the market equilibrium point is dynamically unstable and the equilibrium can never be maintained sustainably. In addition, this phenomenon extends to the entire economy.

While he had little influence on general economists, Ezekiel has long been described as the man that justified the agricultural exception because of the rigidity of demand and its consequences for market stability.

State-Control of Agriculture After World War II and its Contestation

The post-war period was marked by a revival of interventionist agricultural policies. The theory of public policy assessment and "cost/benefit analysis" developed and spread.

The cost of price fluctuations for the various actors and for society as a whole was analyzed. Their high social cost justified policies aiming to eliminate them.

In regard to ways to lower these fluctuations, one can distinguish between:

- The international market, where the problem comes from producers' poor information and their anticipation errors. It is therefore appropriate to set up some degree of "planning": product agreements grew out of this analysis, but they failed because some countries did not play by the rules.

- On the national level, agricultural policies. The levers to regularize domestic prices are legion (input subsidies, storage, export subsidies). Little costly in the case of shortages, these policies become costly when surpluses emerge because of stable prices.

Several elements then led to the domination of liberal ideas:

- The theory of "lobbies": farmers, highly organized, managed to extort extravagant advantages from society. To end this, the market should be allowed to balance supply and demand, giving farmers only set compensation linked to the rights that they had historically acquired. This is the intellectual foundation for decoupled payments.

- Studies based on "calculable models of general equilibrium" showing that exploiting comparative advantages would be likely to increase global incomes significantly.

- The observation that many countries have not developed at the expected pace. The "structural adjustment" policies followed.

Faced with the risk that liberalism would in return lead to price fluctuations, the authors counted on futures markets, various financial products, and harvest insurance systems to guarantee farmers' revenues.

The Return of Liberalism After 1980, Contested by "Chaos" Theorists

Liberal ideology had a considerable influence on European and American agricultural policies from the 1980s to 2007, and on the inclusion of agriculture in the Uruguay Round.

The problem linked to price fluctuations was ignored, partially because we had forgotten that agricultural prices fluctuated and partially because we believed that liberalization (and therefore the substitution of a global market for a "narrow" international market acting as an outlet for surpluses) would resolve this fluctuation due to the "law of large numbers."

The outcome of these liberalization efforts is currently mixed, with the degree of liberalization much higher in Europe and the United States.

The recent progress in economic theory when it comes to the chaos dynamic could be the starting point for a new approach to the problem of agricultural price fluctuations.

In fact, despite liberalization, international prices currently continue to fluctuate with the same magnitude as before.

From this standpoint, it should be noted that the theory that fluctuations would be lessened by expanding the market depends on a crucial assumption: that supply fluctuations depend on phenomena beyond farmers' control, such as weather incidents or epidemics ("exogenous" causes). However, some research based on mathematical "chaos" theories shows that, while the causes are "endogenous" (that is to say linked to anticipation errors and production times), the fluctuations can be highly irregular, with the absence of any periods. The practical conclusions from the analysis underlying these models go against the grain of those that recommend liberalization: by merging two markets, one obtains synchronous fluctuations that are as devastating as those that originally existed in the two separate markets. Similarly, while with fluctuations of exogenous origin, the liberalization of a production quota system makes it possible to attenuate fluctuations on the external market, in the case of endogenous fluctuations, such a system stabilizes the external market.

In Conclusion

Despite infinitely more sophisticated research instruments supplied with more reliable and more complete statistical sources, the heart of the debate has not evolved much since the time of the controversy between Turgot, a brilliant theoretician whose theories relied on fragile axioms, and the pragmatic Galiani who attempted to measure theory against the yardstick of reality and examine specific cases. In the alternation between phases of liberalism and interventionism, the rapidity with which the political

leaders forget the conditions under which the previous episode happened and their incapacity to learn the lessons from them is surprising.

Galiani's pragmatic viewpoint seems better suited to real conditions than the theory of global general equilibrium. The interest of the general equilibrium theory as the basis of comparison and as an ideal is not up for discussion: in economics, this theory plays somewhat the same role as the notion of lack of friction plays in rational mechanics. But in the real world and on the Earth's surface, friction always plays a major role, and all applications of mechanics take it into account. It should be the same in economics.