

# PRINCIPAL ELEMENTS OF AGRICULTURAL REFORMS IN TRANSITION ECONOMIES: IMPLICATIONS FOR CUBA?

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Economic reforms in the mid-1980s and early 1990s transformed agricultural production, consumption, and trade in the former socialist countries of Central and Eastern Europe (CEE), and in the Former Soviet Union (FSU). Similar reform processes were implemented in China (1979) and Vietnam (1986).

In the early 1990s, and as a response to the economic shock caused by the disappearance of the Council for Mutual Economic Assistance (CMEA) in 1989 and the disintegration of the Soviet Union in 1991, Cuba implemented moderate agricultural reforms such as: (1) converting state-farms into Basic Units of Agricultural Production (UBPCs) in 1993, and (2) reintroducing the Farmers' Markets ("*Mercados Agropecuarios*") in 1994, which were closed as part of the "Rectification Process" (RP) in 1986.

More recently, starting in 2007, Cuba has implemented a series of agricultural reforms to increase domestic production, improve efficiency, and substitute food imports (García Álvarez and Nova González, 2014; Nova González and González-Corzo, 2015). The most important include: moderate increases in the prices paid by the state to agricultural producers, expansion of usufruct farming, limited decentralization in the commercialization of selected agricultural products, and micro-loans by state banks to non-state agricultural producers (González-Corzo, 2013; Nova-González, 2013; Mesa-Lago, 2014; Spadoni, 2014; Riera and Swinnen, 2015).

This paper identifies the principal elements of agricultural reforms in transition economies, summarizes the agricultural reforms implemented in three coun-

ties, the Former Soviet Union (FSU), China, and Vietnam, and briefly discusses principal transition issues confronted by these post-socialist economies and their implications for Cuba, as the latter continues to "update" its socialist economic model.

## AGRICULTURAL REFORMS IN TRANSITION ECONOMIES: PRINCIPAL ELEMENTS

### Price and Trade Liberalization

The process of price liberalization involves the removal of the state and its central planning apparatus as the principal coordinating mechanism in the economy, and its replacement with market-based coordinating mechanisms (Kornai, 2008). Functions such as the allocation of inputs (e.g., labor, capital, and other productive resources), and the distribution of output are no longer determined by the central plan; instead the market serves as the principal coordinating mechanism and source of price signals (Kornai, 2008).

Key reform measures include the elimination of price controls (e.g., price ceilings and price floors), subsidies, quotas, and other non-market rationing mechanisms.

The economic effects of price liberalization include price changes (for inputs and output), economy-wide inflationary trends, changes in the distribution of income and the concentration of wealth, and changes in key monetary variables that influence market behaviors (Liefert and Swinnen, 2002).

Consumer and producer prices change as a result of price liberalization, and agricultural output declines

as increases in input prices outpace increases in consumer (output) prices, negatively affecting the profitability of remaining agricultural producers (Macours and Swinnen, 2000). One example of this is the demand for livestock. Price liberalization in most transition economies increased the cost of inputs (e.g., animal feed, grains, oilseeds, etc.), resulting in significant decreases in the demand for these products by livestock operations; this, in turn, affected the profitability of livestock feed suppliers—forcing many into bankruptcy.

In terms of the impact of price liberalization on consumer behavior, it is worth noting that in the case of *income elastic (or normal) goods*, higher consumer prices caused by price liberalization reduces households' real incomes, which in turn decreases their demand for agricultural products, and ultimately contributes to the decline in agricultural output (primarily experienced during the early stages of the transition process (Macours and Swinnen, 2000). Of course in the case of *inferior goods*, the opposite is true: lower disposable household incomes (caused by price liberalization) results in *increases* in the demand for agricultural commodities (in this category)—shifting the demand curve outwards to the right (Liefert and Swinnen, 2002).

Trade liberalization is another important reform measure during the transition period (Trzeciak-Duval, 1999). Prior to the reform process (or transition from the classical socialist model), agriculture was (indirectly) subsidized by setting domestic prices for agricultural commodities above world trade prices (Liefert and Swinnen, 2002). During the early stages of trade liberalization, and as a result of the effects of socialist planning on the agricultural sector, and its lack of international competitiveness, output and exports initially tend to decline (Sarris, Doucha, and Mathijs, 1999). After trade was liberalized, domestic prices (for agricultural products) increased, until they reached world prices, providing economic incentives to gradually increase agricultural output and exports (Liefert and Swinnen, 2002).

### **Property Rights and Restructuring Farming Operations**

The transformation of property rights and farming operations is another key element of the transition process (Swinnen and Rozelle, 2006; Gould, 2011). This element of the post-socialist transition requires radical changes in property rights, in favor of private property over collective ownership (or state ownership of the means of production), profound changes in the administration, management, and organization of agricultural or farming operations, and radical transformations in the production and distribution of agricultural products (Tzerciak-Duval, 1999; Swinnen and Rozelle, 2006). Restructuring of *all* aspects of farming operations—including property rights—transforms the production and distribution (or commercialization) of agricultural products and has far-reaching economic effects (Liefert and Swinnen, 2002).

In most transition economies, farm restructuring was motivated by price liberalization, which provided the necessary economic incentives and competitive pressures to motivate the radical transformation of farming and agricultural operations.

Initial policy measures to restructure farming operations include: “rights reform” (e.g., the expansion of usufruct terms, more flexible and autonomous contracting arrangements), the introduction of direct economic incentives (e.g., increases in nominal agricultural wages, higher state prices for contracted agricultural products), expanded “individualization” of agricultural production (e.g., granting greater autonomy to cooperatives and private farmers), and, of course, the total privatization of agricultural enterprises (or operations) (González-Corzo, 2015). However, the most significant reform policy measures related to farm restructuring consist of land reform and privatization (Liefert and Swinnen, 2002).

At the onset of the transition process, reformers applied a policy mix to restructure farming operations. In some instances, “control rights” (i.e., the ability to determine what to plant and what inputs to use) were introduced as the principal policy tool; in other cases, priority was given to “income rights” (i.e., allowing producers to keep and administer any residual

income generated by productive activities) were the preferred policy tool; while in other instances a mix of “control rights” and “income rights,” similar to what Nova González (2013) has recommended in the case of Cuba, was applied (Swinnen and Rozelle, 2006; Nova González, 2013).

In most transition economies, restructuring farming operations and property rights was closely linked to price liberalization. Once price liberalization was set in motion, and the pressures from market competition intensify, the desire to increase profitability and to remain in operation—under an increasingly competitive and profit-oriented environment—motivated agricultural producers to restructure or reorganize their operations. This was achieved through aggressive cost reduction efforts, the adoption of new technologies and production techniques (or methods), and of course land reform through the process of agricultural privatization.

### **Institutional Reforms**

The development of a more efficient institutional framework to support market-based economic activities was another important component of the agricultural reforms in transition economies. Markets increase economic efficiency by sending price signals, which reflect the value of scarce (or limited) resources, and significantly minimizing transaction costs (Rothbard, 2004).

All economies are constrained by limited or scarce resources, thereby limiting their ability to satisfy the needs and wants of all members of society (Rothbard, 2004). As a result, the economy (or economic system) must provide some method of placing a set of values on different goods and services that reflect the relative needs and desires of the society (or group of people) for which these goods and services are produced. In a market-based economy, the value of any good or service is measured by its price, and the valuation process is normally accomplished by buyers or consumers as they spend their incomes (Leftwich and Eckert, 1982).

The organization of production (or output) involves the efficient utilization of resources (inputs, factors of production), and their reallocation from activities that consumers value less to those that (through the

signals sent through the price system) they deem more desirable. In a market economy, the price system organizes production. Producers that are able to produce the goods and services that consumers want are able to receive higher prices for their output, and will be more profitable than those that produce goods and services that consumers want less urgently (Leftwich and Eckert, 1982).

The drive to maximize profits provides the incentive for efficient production, as higher efficiency, holding all else constant, and results in greater profitability (Leftwich and Eckert, 1982). The efficient allocation or distribution of goods and services in a market economy is accomplished by the price system in conjunction with the output decision described above (Leftwich and Eckert, 1982). The distribution of goods and services in society depends on the distribution of income. In a market economy, those with larger incomes obtain larger shares of the economy’s output of goods and services than those with smaller incomes (Leftwich and Eckert, 1982).

Income distribution depends on the distribution of resource ownership in the economy and whether or not households or individuals employ these resources in their most productive uses. Income differences often result from differences in resource ownership between households or individuals and from distorted uses of these resources (e.g., when these resources are not efficiently utilized to maximize their income-generating potential) (Leftwich and Eckert, 1982). Income differentials resulting from the latter can be corrected through market-based mechanisms. In fact, assuming that factor markets are always able to reach equilibrium, resource owners are expected to find the optimal uses for their resources in order to maximize their income-generating potential; underutilized resources will be reallocated to optimal uses through the price system. However, when income differentials cannot be self-corrected, the need for government intervention (in the market) arises (Leftwich and Eckert, 1982).

If society believes that income differentials should be reduced, modifications can be implemented without completely eliminating the price system (Leftwich and Eckert, 1982). In this case, the government may

employ policy tools like taxes, subsidies, and indirect transfers for income redistribution purposes. In a market economy the short-run rationing of the goods and services produced are rationed through its central allocation mechanism: the price system. Price also rations goods and services over time, resulting in Pareto optimal (or Pareto efficient) outcomes (Leftwich and Eckert, 1982).

In order to effectively allocate scarce inputs and to efficiently distribute output, markets require supporting institutions, which are primarily responsible for enforcing contracts and property rights, ensuring access to credit and finance, and facilitating the transmission of price signals through the provision of “perfect” (or symmetric) information (McMillan, 1997; Rothbard, 2004). The absence of market-supporting institutions during the early stages of the transition process constrained agricultural production and hindered the effects of the reforms (Lerman, *et. al.*, 2003). These distortions were later addressed through the development of market-supporting institutions, consisting of a mix of public and private institutions capable of enforcing contracts and property rights, and supporting access to wholesale input markets and output markets (Swinnen and Rozelle, 2006).

The role of private initiatives in this aspect is worth mentioning; some notable examples include the emergence of private contract enforcement mechanisms, vertical integration (between producers and other elements of the supply chain), input provision programs (by private suppliers to their agricultural customers) (e.g., fertilizer, pesticides, and seed provision arrangements by private suppliers and their clients), specialized financial arrangements (e.g., credit financing by suppliers; factoring of accounts receivables, and other forms of lending and financial assistance) (Swinnen and Rozelle, 2006).

## CASE STUDIES

This section presents a brief summary of the principal policy measures implemented in the FSU, China, and Vietnam, to transform their agricultural sector.<sup>1</sup>

### Former Soviet Union (FSU)

The principal agricultural reforms associated with the process of economic opening, or *perestroika*, in the FSU consisted of three important policy measures implemented under the leadership of Mikhail Gorbachev (Álvarez, 2004):

- **Law of Collectives (or Decree on Agricultural Management) (1986):** This policy measure increased producer autonomy, introduced “production incentives” and authorized collective farms to sell surplus production at “deregulated prices.”
- **Law of Cooperatives (1988):** This policy measure eliminated plan targets for agricultural production cooperatives and collective farms. In addition, it authorized the creation of auto-financed, self-managed, production cooperatives in any sector of the Soviet economy.
- **Law of Leasehold (1989):** Authorized long-term leases of state-owned lands for private farmers.

### China

Starting in 1979, China implemented the following policy measures to dismantle its communal system of agricultural production and transition from the classical socialist model (Swinnen and Rozelle, 2006):

- Increases in the prices (above the quota prices paid by the state) for selected agricultural products, mainly in poorer rural regions,
- Transforming agricultural property rights by dismantling collective farms, and replacing them with a “contract responsibility” system, also known as the “Household Responsibility System.”

1. See Trzeciak-Duval, 1999; Sarris, *et.al.*, 1999; Swinnen and Rozelle, 2006; and González-Corzo, 2015 for a more detailed analysis of the policy measures implemented to transform agriculture in the transition economies of Asia, Central and Eastern Europe, and the FSU. For more on Cuba’s agricultural reforms see: Álvarez, 2004; Nova González, 2013; Mesa-Lago, 2014; Nova González and González-Corzo, 2015.

- Extension of usufruct farming (by expanding the duration and provisions of usufruct contracts for private farmers),
- Development of “rural industries” and eventual expansion into “township-village enterprises,” to compete with state-owned enterprises (SOES) in the agricultural sector.
- Gradual replacement of centralized planning (or bureaucratic coordination) with market-oriented coordinating mechanisms—as part of a gradual movement in favor of “individualized farming”

### **Vietnam**

Vietnam’s economic reforms program, known as “Doi Moi,” was launched in 1986. In terms of agricultural reforms, “Doi Moi” mostly replicated the Chinese experience. The most important agricultural reforms implemented in Vietnam after 1986 included (Swinnen and Rozelle, 2006):

- Replacement of central planning with market-based coordinating mechanisms starting in 1986.
- Legalization of small private enterprises (1986 and 1987),
- Decreased emphasis on agricultural cooperatives as a “superior form of socialist production.”
- Allowing cooperatives to initially sell 50% of their output directly to consumers.
- Introduction of more flexible land use rights (to focus away from collective farming in favor of individualized farming).
- Introduction of bankruptcy laws (for agricultural producers), and eventually the privatization of agriculture.

### **TRANSITION ISSUES: IMPLICATIONS FOR CUBA?**

As a result of the legacy of the classical socialist system, the tensions generated as the plan and the market try to coexist during the period of rapid transformations, the transition from the classical socialist model to some form of “market socialism” (or “mixed market economy”) and ultimately to a market-based (or capitalist) economy, has a profound economic and social impact that could last years,

even decades. The experiences of China, Vietnam, the countries of CEE, and the FSU suggest that there are several important “transition issues” that should be addressed by a combination of policy measures and responses. These include (but are not limited to): (1) the relationship between the plan and market; (2) the role of the state in the post-socialist order; (3) property rights; and in the case of agriculture (4) concerns about food consumption and food security.

The final section of this study briefly addresses these four issues and their possible implications for Cuba—as the island continues to “update” its socialist economy, particularly its strategically important agricultural sector.

### **The Plan and the Market**

The post-socialist reform experiences of China, Vietnam, the CEE and the FSU demonstrate that one of the principal issues that emerges during the transition away from the classical socialist model is the conflict between the central plan and the market. This conflict is not a new phenomenon; its historical roots date back to the debates between the advocates of “market” or “reform socialism”—such as Oskar Lange (1936, 1937) and Abba Lerner (1936)—and their counterparts in the Austrian School of Economics—namely, Ludwig von Mises (1951) and Friedrich Hayek (1944) during the early part of the XX Century.<sup>2</sup>

The main underpinnings of the “socialist calculation debate” are quite straight forward: by nature, the transition from the classical socialist model to some form of a “socialist market economy” (or “mixed socialist economy”) requires the coexistence between the plan and the market (Kornai, 2008). While the supporters of market socialism—e.g. Lange (1936, 1937), Lerner (1936)—claimed that (at least) in theory socialism could make (some) use of the market (or market-based coordination mechanisms), its critics—the historical experiences of the post-socialist economies in Asia, CEE, and the FSU have demonstrated that combining these two opposing forces (i.e., the plan and the market) inevitably re-

2. For a detailed review of the literature and a comprehensive account on the “socialist debate,” see Boettke, 2002.

sults in tensions and what Kornai (2008) defined as the “inner contradictions of reform socialism.” This view is supported by Hayek (1944) and von Mises (1951), who correctly theorized that even though (in theory) the socialist system is capable of adopting market-based coordination mechanisms, state-run enterprises lack the incentives to observe (and apply) market principles and are unable to respond effectively to market pressures.

In their seminal study of the gradual evolution of market-oriented coordinating mechanisms in the Cuban economy, Deere and Meurs (1992) highlight some of the principal issues associated with the combination of the plan and the market during the post-socialist transition period. The two most important can be summarized as follows:

- The distributive function of the output market requires the existence of complementary competitive input (or factor) markets.
- Markets (or market-based coordinating mechanisms) generate tensions with the central plan as they perform their price-signaling and Pareto optimal distributive functions; in addition, to function efficiently, markets require contract “voluntary exchange,” which is antithetical to the collectivist nature of central planning (Friedman, 1980).

### **The Role of the State**

One of the most important issues faced by post-socialist transition economies pertains to the role of the state in the economy. For a market economy to function efficiently, and for the price system to effectively allocate inputs and ensure a Pareto optimal distribution of output, the role of the state (or the government) should be primarily focused on contract enforcement, the protection of (private) property rights, and supporting and operating strong and independent (legal) institutions (Nee, 2000). Limiting the role of the state to these primordial functions serves to protect (and facilitate) market transitions.

### **Property Rights**

The expansion and protection of private property rights during (and after) the transition period is another important “transition issue.” It is an indispensable requirement for the functioning of a market-

based economy (Hartwell, 2015). In accordance with Marxist theory, the classical socialist model explicitly outlawed private property rights. Regardless of official prohibitions and ideological opposition to private property, some, mostly small-scale, private activities were permitted, or rather reluctantly tolerated, under the classical socialist model (Kornai, 1992; 2008). Under classical socialism, most of these, small-scale, private economic activities were manifested through the “shadow economy” (or informal sector), which was reluctantly tolerated by the state, as it served to correct some of the inefficiencies and satisfy some of the unmet needs (including shortages) created by classical socialist model (Kornai, 1980).

The enforcement and protection of property rights is an essential requirement to promote investment and stimulate production during the transition period (and beyond). In fact, property rights are sacrosanct in a market-based (or capitalist) economy and represent one of its fundamental pillars. As Hartwell (2015) demonstrates, “the creation or (in reality) expansion of property rights allows for long-term investment, development of relationships with suppliers and producers, creation of contracting mechanisms with the force of law, the ability to engage in business and personal relationships with protection against capricious and arbitrary interference, and general protection of economic freedom.”

Furthermore, “in a business sense, property rights allow for the development of an economy beyond clan or familial relations and into larger scale production; with security property rights, and individual or a firm may do business with people who are not directly related to them, as well as conferring a layer of anonymity on transactions” (Hartwell, 2015).

### **Food Consumption and Food Security**

The effects of economic reforms on food consumption and food security are another major issue associated with the transition from classical socialism. The transition from the classical socialist model in China, Vietnam, the countries of CEE, and the FSU contributed to the significant restructuring of their agricultural sectors (Liefert, Lohmar, and Serova, 2003). The process resulted in notable declines in agricultural output, which contributed to marked price in-

creases, and large reductions in the domestic consumption of selected agricultural products (Liefert and Swinnen, 2002).

As Macours and Swinnen (2002) indicate, the two principal causes of agricultural output declines in transition economies are price liberalization and privatization (of agricultural land and enterprises). *Price liberalization* (i.e., the partial or total removal of state-imposed price controls) accounted for 46% of the decline in agricultural output in the transition economies included in the Macours and Swinnen (2002) study.<sup>3</sup> Similarly, *privatization* (i.e., land reform replacing state ownership of agricultural land with private ownership) was responsible for an estimated 39% of the decline in agricultural output included in their study (Macours and Swinnen, 2002).

Higher prices (stemming from price liberalization), combined with declines in agricultural output, raised concerns about food consumption (or affordability) and food security in transition economies (Swinnen and Rozelle, 2006). Due to rising unemployment (caused by the restructuring of important sectors of the economy) and inflationary tendencies (caused by price liberalization and lower agricultural output), food and agricultural products become less affordable for a growing segment of the population, requiring

the implementation of policy measures to improve food consumption and security.

According to Swinnen and Van Herk (2011), the most important policies to address food consumption and food security concerns in transition economies should include:

1. Promoting economic growth and development.
2. Providing an adequate social safety net to protect (and support) “food insecure” households.
3. Improve the policy environment and create a stable institutional framework (to facilitate market transactions), particularly trade policies and reforms to improve agricultural productivity.
4. Promote and support investment in agriculture and domestic food processing industry, and
5. Increase public sector investment in infrastructure and education.

In the case of Cuba, as the transition from the classical socialist model continues, the implementation of policies along these lines will likely have a positive impact on food consumption (or affordability), reduce food insecurity (or vulnerability)—particularly for low-income households (most of which receive state salaries in “regular pesos,” CUPs—incentivize increases in agricultural output, improve agricultural labor productivity and improve overall outcomes for this still vital sector of the Cuban economy.

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3. Macours and Swinnen (2002) analyzed the principal causes of the output declines in five crops (barley, corn, oilseeds, sugar, and wheat) in eight transition countries: Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovak Republic, and Slovenia.

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