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Agro-holdings in Russia: Temporary phenomenon or a prevailing business form?

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Abstract

Since the 1990s, in Russia, numerous large scale agro-holdings emerged, which link various farms, entities of the upstream and downstream sectors, and even totally unrelated industries. As all these affiliates are legally registered as independent units, there is only scant information about the holdings' overall performance. Based on a unique panel data set from Moscow and Belgorod regions, we investigated the growth trajectories of farms belonging to agro-holdings vis-à-vis independent farms by applying a quantile regression approach. Evidence points to little differences among general performance indicators of both types. Any advantages of affiliated farms appear to be due to extramural factors; i.e. it is all about how to link individual production units, thus benefiting from strong positioning in local and regional markets and making the most of the lobbied ties to the relevant politics. In sum, agro-holdings are assumed to remain as a model for organizing agricultural production.

Key words: agro-holdings, company trajectories, Gross Value Added (GVA) growth performance, quantile regression analysis, Russia, farm level

JEL: O13, P32, Q13

Introduction

In the literature, an independent "family farm" is commonly assumed to be the most efficient form for coordinating farm production. In particular, it is argued that within agricultural production the technological scale economies are exhausted before the farm size exceeds the labor capacity of a family, and further growth of the labor force is inhibited by rising supervision costs (Binswanger et al., 1995; Eastwood et al., 2010). The family governance brings advantages due to the smallness of the group and its hierarchical structure, so that shirking and free-riding among family members is restricted (Pollak, 1985).

However, besides such farm types, the emergence and survival of large-scale agricultural enterprises was observed for over two decades in a number of former Soviet economies in form of either investor-owned firms or transformed agricultural production cooperatives. This holds particularly for the main cereal producing states of the Commonwealth of Independent States (CIS), i.e. Russia, Ukraine and Kazakhstan (RUK), where numerous large-scale agro-holdings emerged (Wandel, 2011). The contrast of what is commonly assumed to be the most efficient form for organizing agricultural production and what can be observed in the aforementioned regions (i.e. farm size going well beyond 'family farm type') raises the question whether it is to be a temporary phenomenon or a prevailing form of farming. In case of the latter, this would challenge the currently dominating theory concerning the most efficient farm structures.

By means of this study, growth trajectories of independent farms are contrasted with those belonging to agro-holdings in order to investigate whether the latter organizational form, measured at micro level, outperforms the other and results ultimately in an economically driven crowding out, which could explain the emergence and persistence of large agro-holdings. The full paper comprises of a discussion of the relevant literature and available empirical evidence on the matter; proposes an analytical framework, illustrates the dataset to be used for the empirical investigations and highlights the corresponding results discussed, while the major characteristics of the most important agro-holdings are deliberated. The main conclusions are outlined here below for illustrative purposes.

Research questions

What drives the emergence of large scale agro-holdings in RUK and will they prevail as a business form? In this light, do we eventually need to question the family-type farming as the presumed most effective form of coordinating agricultural production?

In fact, on the one hand, drivers for the agro-holdings could be economic factors and an adaptation towards an inappropriate institutional setting. Accordingly, economies of scale do exist, but rather emerge through the better overcoming of market dysfunctions than through mere production technologies. Accordingly, the emergence of large agro-holdings would thus be the way to overcome deficiencies and in-appropriateness of any kind of 'soft infrastructures' (e.g. institutions, etc.), i.e. the emergence of agro-holdings would be simply the appropriate answer given by the markets to a correspondingly in-appropriate institutional environment. And they likely prevail only until the latter will improve. On the other hand, policy interventions, tax incentives, subsidies, and/or simply lobbied ties could be vital.

Data and Methodology

The main analytical idea of this study is to examine the distribution of annual growth rates of all sampled farms and test whether those that belong to a holding are found to (1) have significantly higher growth rates than others, i.e. are less affected by external shocks, absorb such shocks better, and tend to avoid accelerated downward trends in times of poor harvest, etc., and (2) whether the growth achieved by these farms is more persistent. In case of the latter, Gibrat's law¹ is challenged and, the empirical evidence would suggest that agro-holdings will prevail, i.e. that they are not just a temporary phenomenon.

Empirically, Gross Value Added (GVA) growth patterns are compared in order to verify whether farms' belonging to an agro-holding results in a growth advantage and whether in this regard mere company size facilitates a persistent growth. To these ends, a semi-parametric quantile regression approach is applied, which allows to investigate whether there are asymmetries in downsizing and upsizing processes. In other words, farms' GVA growth serial correlation changes are analyzed along their corresponding growth rate distribution.

The empirical analysis relies on data of farms located in Moscow and Belgorod regions, available for the years 2001 – 2008. Both regions are characterized by the emergence of a series of strong agro-holdings (Rylko and Jolly, 2005). The data stem from annual reports of Russian agricultural enterprises, provided by First Independent Rating Agency (FIRA (2008), a professional agency that collects farm-level production and accounting data. The panel is unbalanced and was obtained by merging several cross-section databases. Data processing was supported by the All-Russian Institute for Agricultural Economics (VNIIESKh) which, inter alia, provided the necessary information on group affiliation of the sampled farms.

¹ Gibrat's law assumes that the growth rate of a firm is unpredictable and stochastic in nature (Geroski et al., 1997). However, the existing empirical evidence on year-to-year growth patterns at firm-level is still subject to a controversial discussion. In fact, in his review of 'Gibrat's Legacy', Sutton (1997) found that half a century of testing had revealed a series of statistical regularities which were incapable to get along with a random-view of firms' growth rate. The empirical evidence on agro-food firms is thus quite limited, especially with regard to RUK countries where the phenomenon of recently emerging large-scale companies is striking and tends to challenge the assumption of a random walk in terms of company level growth rates.

Conclusions

The most striking message of this study is what we did not find: Evidence of superiority of farms belonging to holdings in terms of any economic performance indicator, a size advantage of the holding members, nor an advantage in terms of receiving subsidies (at least what concerns the capability of turning them into company growth). All this is commonly brought forward as arguments for explaining the emergence of large scale agro-holdings. To this end, our results challenge earlier literature on the matter (e.g. Visser et al., 2012).

With regard to the question what business form ensures organizing agricultural production more effectively, based on the available evidence, it cannot be stated that farms managed by agro-holdings are superior businesses compared to the independent farms. Though, there is no evidence of the opposite, either. The paradigm of smaller-sized, more family-farm type oriented agribusinesses to be assumed as more effective therefore remains to be challenged. But, is a general reassessment necessary? Our analysis provides reasoning for saying yes AND no!

First, there is the evident emergence of large-scale agro-holdings in Russia's agriculture (and beyond). Moreover, the observed holdings tend to keep on growing and obviously undergo a further rigorous concentration process. As the differences at micro-level are marginal (if not absent at all), evidence suggests that it is not about organizing agricultural production at farm-level where those that belong to a holding are better off. In fact, agro-holdings do not grow organically, i.e. driven by over-proportional GVA growth of their affiliates. Any possible advantages resulting from better access to factor and/or product market due to superior aggregated size, synergies within the holding or e.g. the (ab)use of market power, appear to be external factors for the farms observed.

Further driving forces for the holding growth is seen in strong intertwined political-business relationships, as well as in significant state support to agri-businesses perceived as 'strategic' (in the sense: 'too big to fail') as well as their conglomerate parents' inclusion in the registry of Systemic Companies. In other words, with regard to the source of agro-holdings' growth, it is all about how to link individual production units, thus benefiting from strong positioning in local and regional markets and making the most of the lobbied ties to the relevant politics; i.e. not about organizing the production itself. Given that, and considering that their relevant performance indicators correspond to that of independent farms, further growth may not be unlimited. However, it is safe to assume that agro-holdings will remain as a business form and as a model for organizing the agricultural production in Russia (and possibly elsewhere). In fact, unless significant changes in the market institutions in Russia will happen, agro-holdings are likely to prevail as an organizational form of agricultural production in future, ultimately, due to their poignant importance to Russia's socio-economic domestic and global interests. Nevertheless, our results also suggest that achieving substantially positive GVA growth in agribusinesses in Russia is possible regardless of agro-holding membership, i.e. independently of the corresponding business form also feasible for smaller and individually operating farms.

Beyond our main research questions, the empirical results obtained point to a weak or even inexistent link between the amount of subsidies granted in Russia and the observed company growth performance. This finding is striking as it puts the entire system of subsidization and its political justification into question. In fact, subsidies in Russia appear to be either distributed rather randomly and/or very poorly targeted. Further analyses in this regard and also on agro-holdings, in general, appear necessary.

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