

Evolution of The Mechanization and Service Provision System in Agriculture

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Abstract

The paper is aimed at the development of machinery and service provision system in agriculture based on the Republic of Uzbekistan from 1991 to 2024. The author analyses the process of formation of the first Machine-Tractor Stations (MTS), their functioning under a centrally planned system, changes following the transition to market economy and privatization of Machine-Tractor Parks (MTP). The focus is placed on the 2016–2018 reform and the A. President Decree of April 19, 2024, that resulted in the complete privatisation of MTPs and changes in the administration system of agrarian service enterprises. The paper examines the socio-economic consequences of the reforms among farm households and individual landowners, quality-of-service control issues and building a competitive environment. Furthermore, it points out contact state- private sector, change in management models and their effect on farmers from a historical-retrospective approach.

Keywords: Agricultural mechanization, service provision, Machine-Tractor Parks (MTP), privatization, agrarian reforms, management of agrarian services, market principles.

1. Introduction

Agricultural mechanization is one of the essential elements that affect labor productivity, production efficiency and resource uses in agricultural sector. In Uzbekistan the agricultural production system has been shaped throughout history due to a variety of political and economic factors and transformed quite dramatically in different periods. Formed in the early years of the 20th century, especially with the establishment of machine-tractor stations, it existed for decades under state control but on a highly centralised basis. Thereafter, in the period after independence, it was continuously restructured on market-oriented lines.

The article is focused on the evolutionary nature of this phenomenon and considers respectively such stages in its development, as establishing machine-tractor stations (MTS) in 1990, new models of management that appeared during the transition to a market economy in the period of 1991s–2000s, institutional reforms of 2016–2018 and full privatization of machine and tractor fleets by 2024. The importance of this study is due to the fact that nowadays the guarantee of provision to agricultural producers with technological equipment, quality of service, price tools and distribution of authority between public and private sectors are concern among the most important agrarian policy directions. Notes 1 Thus this chapter focuses on the emergence, development and institutional background of the reforms in mechanization and service provision system, together with their achievements and failures following a historical-retrospective logic. The chains of this mechanization and provision of services system in the agriculture of Uzbekistan are analyzed historically. For its part, the research outlines the process that began with the creation of MTS number 1 in 1991 and concluded with full privatization of MTF in 2024 as historical-retrospective. Its findings provide for an analysis of the mechanisms used in the links between state and private sector, transforming management models, and the consequences which these processes have on farmers. The structure of complete mechanization and the supply service in agriculture of Uzbekistan has changed considerably in last years. The latest update dates

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back to the Executive Order of April 19, 2024. This regulation, which is called "On Additional Measures to Speed Up the Privatization of State-Participating Enterprises Serving Agriculture," brought significant changes into the property status and management mechanism of "O'zagroservis" JSC. In the SOVCHOSES, 89% of the mechanized enterprises were actually sold to entrepreneurs. The sale passed by transferring a part of the shares of regional "Agroservis MTF" LLCs to entrepreneurs at fair value. The supply of mechanization and service functions was preserved meanwhile, with possibility of installment payment over five years[1].

As a result, agrarian reforms ended with the elimination of state-run machine-tractor stations (MTS) that had worked for nearly 100 years. However, an ambiguity remains in the decrees: despite a renunciation of all machine-tractor stations (MTS) to the private economy, their most important function – providing mechanization and service assistance to, as we have seen farmers - remained under tight control by the state. This has prompted questions about how fully privatized the system is.

2. Research Method

The historical-retrospective method of study allows to systematically analyze the creation, transformation and institutional development of the system of mechanization and servicing in agriculture from 1991 to 2024. The methodology is made up of the following itself reciprocal phases: - historical-retrospective analysis Legal-Institutional analysis -comparative policy analysis Socio-economic analysis Study of sources and triangulation Systemic agrarian service structures analysis Analytical-synthetic interpretation. The use of historical, legal, comparative and socio-economic methods enables consideration in a complex combination of the process of development over 100 years agricultural tractors and mechanization services in Uzbekistan. This integrated method allows not only assessment of the written institutional changes, but also a reflection on what has been realized in practice for agriculture and markets development and for state-private sector relations.

3. Result

According to the character of the new system, for the first time land and equipment was passed over into private ownership en bloc, during which management processes came to be completely based on market principles. A body scorns the regional "Agroservis MTF" LLCs from "O'zagroservis" JSC, which own self-traction machine and tractor park. For promoting competition rooms to individual entrepreneurs were permitted to provide mechanization and service support. Simultaneously, the systems of centralized monitoring and public control over contracts for services to farmers, households plots, and dehkan farms were created [2].

But the privatised system is not entirely free from state regulation. The issues of service pricing and some other regulation questions in the work of machine-tractor stations are still actually not strictly regulated. This has created uncertainty between the state and businessmen, both legally and financially. For this reason, it is hard to make final conclusions regarding the effects of the adopted decrees. In this context, it can be indicated recent media reports that 36 cotton-textile clusters have gone bankrupt in whose cases across the country were filed under IB court[3].

The foundational changes to the MTF system were, indeed, made in 2018. At that time, "Yukorchi traktor--texnika to'plamlari" and MTF "Agrotexservis" enterprises had been restructured; the share packages of the "Avtosanoat Agrotexservis" LLC belonging to "O'zavtosanoat" JSC were warehoused into the shares of JSC "O'zagroservis". From January 1, 2018 the rights and obligations were transferred to "O'zagroservis" JSC in full. In the same year, the organization was re-organised in its own right and 26 of these machine-tractor's fleets had been sold to private entrepreneurs, with the remaining three fleets kept as state unitary enterprises.[4].

The foundation for these developments was established in 2016. In this connection the Joint-Stock Company "O'zagrotexmash" as an integrated system of production, sale and servicing of agricultural equipment with timeless existence was established. Association "O'zagromashservis" reorganized to joint stock company "O'zagroservis". Also, a special fund was created in "O'zagroservis" JK for updating, reconstruction and modernization of servicing forms of agricultural technical service. Funding for this fund comes from a specified percentage of denominational income and other legal means not prohibited by law*[5].

In the first decade of its independence, the state was particularly concerned with the technological support in agriculture. Notably the first resolution of the Republic of Uzbekistan PQ-1758 signed by President I.A. KARIMOV was "On measures to implement modernization, technical and technological re-equipment program for agriculture in 2012–2016". This course presented an outlook on the future of agricultural machinery manufacturing, and efficient use of equipment. Simultaneously, the origins of today's reforms can be found in Soviet times. State-operated machine-tractor stations

(MTS) were particularly important in the mid-20th century, serving as state-run enterprises that provided farm machinery services to kolkhozes and sovkhozes under a system of centralized management. This system lasted almost a century and was gradually dismantled during 'transition' to the market, indeed after independence it underwent massive reform [6].

For the next five-year (2012-2016) period, a 'Program for Further Modernization and Technical-Technological Re-Equipment of Agricultural Production' was drafted. The program was to enable small-scale production of machines and tractors, abstract art to stimulate the replacement of outdated machine-tractor fleets irrespective of ownership forms, and build a single experimental base for testing by combining across existing scientific, design and production forces. In addition, the programme aimed at improving the practice of calculating fees on machine-tractor park services and raising responsibility for timely payment using funds from target accounts in the Ministry of Finance of the Republic of Uzbekistan [7]. The first measures comprising this program were taken in 2008–2012 by a Presidential Decree PQ-832 of "On the Further Development and Modernization of Agricultural Machinery Manufacturing." The order was intended to reform the operations of alternative MTFs, ensure delivery of a broader array of services, and improve the quality of those services. It also suggested that the private homeownership of failing alternative MTFs should be sold off too -- provided that "investment commitments" were taken on and "operational characteristics maintained". So the 2018 reform — sell off some 89 MTFs to private entrepreneurs in an auction process — was pretty much a matter of building on planned reforms in 2008. Central to both decrees was the retention of MTF's as the primary business function.

The transfer of responsibility for MTF management to entrepreneurial undertakings had been put on the political agenda by the late 2000s. Nevertheless, in the "Uzbek model" of development when the state acted as a dominant reformer, the attempt to convert MTFs into independent and high-quality service providers was not successful. On the other hand, in practice, the sale of MTFs to entrepreneurial agents set them in the path of economic, financial and legal-social independence but there was some vagueness regarding quantity and quality of services for some period.

The principal reform of the MTF system is related to that imposed in 2000. In order to develop economic reforms in agriculture further, raise the level and quality of the mechanized services rendered to farmers, enhance technical service sector, State-Cooperative Committee on November 16th this year established the joint stock Company "O'zagromashservis" based on "O'zqishloqxo'jalikta'minotuzatish." For this purpose, regional connections of machine-tractor stations were established in the Republic of Karakalpakia and oblasts. They were mainly created over the joint-stock companies "Agromashservis" and the republican production association "Maxsusta'mirlashsozlash".

The mechanical and tractor stations of oblasts were used, as contract work on ploughing or cultivation soil operations treatment harvesting for grain, rice, fodder crops with cotton-picking machines harvesting and also an agricultural service of maintenance and repair (running) tractors combines. Grain harvesters, cotton-picking machines etc.[8]

In fact, there have been alternative machine-tractor fleets (MTFs) in operation since 1998. They were created at district level as independent businesses, with the objective of efficient management and to foster competition in the delivery of services. The substituted MTFs were formed according to workshops at the management of collective farms and became new-formation infrastructure entities that had given technical and service support to farmers, dehkan farms, and the population in common [9]. Other types of MTFs (machine-tractor pools) differed in several respects from those belonging to the state. Their services were rendered and accounted for on the basis of work performed directly linked to those executed by the machine-tractor parks on the farm using subsoil, specialists and mechanizers from other user farm entities, no additional apparatus having taken place.

The years of 1996 and 1997 are symptomatic for the history of independent Uzbekistan. They were approved at the 21 February 1997 for the organization and activity of units machine-tractor stations. But the regulation was declared invalid on April 4, 1997 by the State-Cooperative Committee "O'zqishloqxo'jalikta'minottuzatish" through registration of model chartered state-shareholding machine-tractor parks. The 'model charter' stood until 2000 and, as against the former regulation, also allowed for a state-shareholding company. This was in line with the reform of state-run cooperative enterprises at local level from a 'state-cooperative' model to a "state-shareholding" one.

MTFs performed basic mechanized agricultural works: soil cultivation, plant protection, harvesting and serviced repair of and transportation to field service cooperatives (FSC) tractors, machines and trading repair parts with tractor-machines organizations. They were used to work with livestock farms, personal subsidiary and dehkan farms, as well as social sectors. The corporation acted by virtue of lease and contract. Salvo was also substantiated by the technical staff and equipment – long- term leased from farms, new machinery and the mechanizers-technicians of disbanded

“O‘zqishloqxo‘jalikta‘minotuzatish” organizations. The company manager was assigned by the State-Cooperative Committee and his main task was to plan the agricultural work on the technological maps, keeping a rigid agricultural time calendar, organizing machinery repair and service basing on standards[10].

The Cabinet of Ministers analyzed work being carried out by pilot machine-tractor parks (MTFs) in 1995–96, reporting that these MTFs successfully became involved with mechanizing complex and labor-intensive agricultural operations. In particular, results were high in plowing and grain crop, rice and cotton harvesting. Indeed, in 1997 they carried out 60% of the ploughing and produced 55% of the grain. The “Magnum” plowing set covered on average 1,665 ha throughout the country per season and the grain harvester “Keys” – more than 700 ha[11].

To guarantee the progressive development of the MTF a step was taken in order to improve its facilities since 1998, equipment was provided from the balance sheet of agricultural enterprises. In accordance with decision of the Cabinet of Ministers of the Republic of Uzbekistan serviceable machinery and equipment in their unamortized value, including plowing tractors, a plow unit, machines cotton picking-up for three rows and between-row adherence and combine harvesters for grain crops, rice crops and procured fodder transferred to balances the state participating MTFs on residual cost on January 1, 1998. MTFs were also given lease rights for repair bases, fuel and lubricants depots of agricultural companies. This resolution also intended to stimulate a competitive environment for the service provision to agricultural organizations. A minimum of two MTFs in each district was recommended. 22 technical (maintenance) centers for imported machinery and 140 technical centers for domestic machinery were created within the framework of this project, introduced to the Republic Karakalpakstan and to other regions during the period from 1998 up to year 2000 [12]. The enlargement of this network resulted in an augmentation of what types, quality or level of mechanization and service provision and how widespread was the supply with machinery as well as fuel-lubricants to farms.

4. Discussion

Uzbekistan in the Early Years of Independence Attempts to Reform Economic Links The first attempts at reform were the market transitions in Uzbekistan. In the event, mechanisation and service provision also went through its own series of convulsions – that is to say with clear inflections in 1996–97 and again in 2016.

The issue On May 6, 1991 the Cabinet of Ministers Resolution “About measures on the enhancement of provision and development of material-technical base at kolkhoz property, sovkhozes and dehkan-industrial complex enterprises under market conditions” was created a new system. Based on this, the Directorate-Main Department of Material-Technical and Engineer Support of Dehkan (Smallholder) Industry Complex (“O‘zglavagros naborremont”) and its republican, regional and district subordinated units was established[1], as well as authorities and enterprises under “O‘zselx ozsnab remont,” namely, State-Cooperative Committee for MaterialTech support mentioned in their long form were formed[13].

In accordance with its charter, it was established as a state management apparatus for the republican agro-industrial complex subordinated to the cabinet of ministers under the President of the Uzbek SSR. Simultaneously the committee, and as an autonomous temporary body divorced from the agro-industrial complex, were demobilised to a pure supply and repair outfit. It was assigned multiple roles including being the allocation center, market place organizer; to procure infrastructure of markets and marketing and trade systems, development promotion of small enterprises and foreign trade agencies as well as setting up commodity exchanges and insurance companies [14].

Yet the core activities of this committee and its regional sections (“Oblselxozsnabremont”) included only a portion of the tasks performed by MTFs, namely repair and maintenance. So, it cannot be claimed that these buildings are new MTFs built in the years of independence. “Instead, the government implemented a policy for the progressive adaptation of Union organizations to republican level and specialization of its activities. Consequently motorization and services started to be done through independent companies.

The mechanization of production processes in breeding and poultry-breeding, greenhouse complexes was widely introduced into practice among the tasks of “Oblselxozsnabremont”. The foreign trade organization provided the technical equipment (auxiliary, energy, ventilation), control-measuring instrumentation and automation systems for these industries and performed commissioning and adjusting work[15]. January 1991 witnessed a critical turning point in the agrarian policy of Uzbekistan. State-Cooperative Committee of Agriculture of the Uzbek SSR was re-organized and converted to the Ministry of Agriculture of the Uzbek SSR by a resolution # 16 from January 11 – cabinet mysteriesagements. The new ministry’s main functions included the creation of conditions for transitioning to market relations, establishment of economic independence of kolkhozes and

sovkhозes as well as proper control of the agro-industrial complex. That this trend had been maintained is demonstrated by the existence of specialized units in its structure that offered mechanization and service to producers.

5. Conclusion and Recommendation

The system of mechanisation and service provision in Uzbekistan's agriculture developed over 120 years through a complex multistage process overlaid with elements that have been inherited. Centralized management worked well for the system of machine-tractor stations (MTS) introduced in 1929, but as markets returned during the Soviet collapse of 1989–1991 this structure started to suppress its own productive capacities. The structural adjustments of the 2000s and the 2010s were introduced to upgrade technical services, rationalise management and create competition in post-independence reforms. Between 2016 and 2018 reforms set out the parameters for changing the property relations in MTPs, as well as gradually withdrawing from state participation in such structures. Lastly, Presidential Decree 2024 privatized the MTPs in their entirety by bringing to an end a century-old system of state management. The transition of the system to private control, however, came with State imposed service directives and participants faced legal and financial battles over costs and authority. In general, this transformation is reflected in enhanced market forces within agriculture, greater private sector involvement and a more diverse pattern of service provision. Simultaneously, the reliable operability of the system on new conditions is also dependent on the quality of mechanization services market and competitive environment creation, price formation and rational borders of state regulation. These are processes of great scientific and practical interest also in the context of future reforms.

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