



Ordered to volunteer? Institutional compatibility assessment of establishing agricultural cooperatives in Uzbekistan

Davron Niyazmetov^{a,b,*}, Ilkhom Soliev^{a,1}, Insa Theesfeld^a

^a Department of Agricultural, Environmental and Food Policy, Institute of Agricultural and Nutritional Sciences, Martin Luther University Halle-Wittenberg, 06099 Halle (Saale), Germany

^b Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, 39, Qori Niyoziy street., 100000 Tashkent, Uzbekistan

ARTICLE INFO

Keywords:

Agricultural cooperatives
Institutions
Top-down
Transition
Uzbekistan

ABSTRACT

In places where state has been historically the most dominant actor of all reforms, it can be particularly challenging to develop non-state forms of organization and governance such as agricultural cooperatives known to reduce transaction costs and utilize economies of scale. This paper explores the latest state policy on the development of agricultural cooperatives in Uzbekistan through the prism of its compatibility with the existing institutional conditions. An exploratory case study approach was used to conduct interviews with representatives of key actors involved in the policy formulation at the national scale and its implementation in two pilot provinces. Applying the analytical instruments of the procedure for institutional compatibility assessment (PICA) on the one hand and based on empirical insights from in-depth interviews (n = 22) and internal policy documents on the other hand, we have identified a set of crucial institutional aspects (CIAs) and their relative importance for the establishment of the cooperatives in Uzbekistan. In addition to the incompatibility of an excessively and exclusively regulatory nature of the intervention with the desired voluntary form of cooperatives' organization, we find that main sources of the policy (in-)compatibility lie within the degrees of information asymmetry, farmers' trust towards the state, and the capacity of the authorities. Although the state's top-down approach was effective at quickly establishing the cooperatives formally, most farmers were informed about the policy only symbolically, who then remained largely skeptical about its value, and considered the state responsible for its implementation. The findings highlight the need for a change in broader institutional environment and allowing time for learning and internalization of self-organization principles by farmers in order to make the economic advantages of cooperatives possible.

1. Introduction

In the existing literature on agricultural cooperatives, it is largely assumed that farmers voluntarily form and join cooperatives, which they own, control, and benefit from (e.g., Sexton, 1986; Bijman et al., 2012; Iliopoulos, 2013). Indeed, in Western countries cooperatives have proven to become a viable form of agricultural production (Tortia et al., 2013; Lerman and Sedik, 2014; Iliopoulos and Valentinov, 2018). The economic roots of farmers' desire to cooperate stem from the need to utilize economies of scale, reduce transaction costs, and address market failures (Cook, 1995; Deininger, 1995; Ortman and King, 2007). At the

same time, cooperatives, based on the pillars of self-help and self-reliance, are said to serve to enhance social capital by empowering its members (Kötter, 1994). While these advantages of self-organization have been the pre-dominant discourse in the literature on agricultural cooperatives, the question of whether and to what extent pre-existing institutional conditions, broadly defined here as formal and informal rules in use (North, 1990, 2005), affect the outcomes of newly introduced cooperative policies remains less explored.

The clash between pre-existing institutional conditions and new policies oriented towards cooperatives can be observed in the post-Soviet region more prominently. Given the success of the Western

* Corresponding author at: Department of Agricultural, Environmental and Food Policy, Institute of Agricultural and Nutritional Sciences, Martin Luther University Halle-Wittenberg, 06099 Halle (Saale), Germany.

E-mail addresses: davron.niyazmetov@student.uni-halle.de (D. Niyazmetov), ilkhom.soliev@landw.uni-halle.de (I. Soliev), insa.theesfeld@landw.uni-halle.de (I. Theesfeld).

¹ The first two authors contributed equally to the manuscript

cooperative model, post-socialist countries have engaged in the “cooperativization” of the agricultural sector, too. However, the transplantation of the cooperative model in those transition countries, similar to legal transplants described by [Pistor \(2002\)](#), faced a stark resistance largely associated with the post-Soviet legacy ([Bijman et al., 2012](#)). Several authors explain that burdened with the relics of the communist past, farmers in these countries inherited certain distrust towards the notion of the cooperative, which they did and continue to associate with collectivization, that in turn gave rise to pseudo-cooperatives ([Theesfeld and Boevsky, 2005](#); [Bijman et al., 2012](#); [Theesfeld, 2019](#)). Although the countries in Eastern Europe curbed the ubiquitous role of state and implemented formal institutional reforms to restore markets and secure property rights to land, state authorities had to take a leading role in the direct support of the development of agricultural cooperatives, since farmers were reluctant to cooperate or at least were not used to the fundamentally different nature of agricultural organization. Results proved to be rather mixed, dependent on the institutional differences in the past and during transition period ([Bijman et al., 2012](#); [Hagedorn, 2014](#); [Theesfeld, 2019](#); [Fadееva and Soliev, 2020](#)). Following the trend in the West, many former Soviet Union countries have also embarked on the mission to instill collective action in agriculture, but again with mixed at best and often also counter-productive outcomes ([Lerman et al., 2016](#)).

The paper aims to contribute to the study of institutional compatibility of policies, particularly by investigating the question of how existing institutional conditions can affect establishment of agricultural cooperatives in a transition country, in the example of Uzbekistan. The latest state policy on agricultural cooperatives in Uzbekistan from early 2019 is geared towards widespread promotion of cooperatives as the main form of agricultural organization ([Decree, 2019](#)). For our research question, Uzbekistan presents an interesting case for three reasons. First, political changes at the end of 2016 heralded subsequent more dynamic transition towards open society and market-oriented institutions, including in the agricultural sector ([Soliev and Theesfeld, 2020](#)). Second, as will be shown in this paper, despite the well-documented desire to shift towards more self-organized forms of governance, the state remains the dominant agent of change, particularly in agriculture. Third, particularly the small-scale production, which accounted for 70% of total vegetables and 60% of total fruits output in 2019 ([The State Committee of the Republic of Uzbekistan on Statistics, 2020](#)), as well as the market failure in the sale and export with up to 40% post-harvest annual loss and only about 30% realization of country’s export potential in fruits ([World Bank, 2020](#)) call for an organizational reform that reduces transaction costs in accessing markets and utilizes the economies of scale for farmers in Uzbekistan.

To systematize our analytical approach, we adapt the procedure for institutional compatibility assessment (PICA) ([Theesfeld et al., 2010](#)), particularly suitable for our purpose of analyzing the implementation of the policy on agricultural cooperatives in Uzbekistan and its interplay with existing institutional conditions. We proceed with an overview of the theory on agricultural cooperatives and theoretical concept of institutional compatibility applied to the context of post-socialist countries ([Section 2](#)). Then, elaborating our analytical and empirical approach ([Section 3](#)), we analyze compatibility of the newly introduced policy on establishing agricultural cooperatives in Uzbekistan, particularly through the lens of identified crucial institutional aspects (CIAs) ([Section 4](#)). We conclude by summarizing and discussing our key findings pointing towards the need for a change in the broader institutional environment and allowing adequate time for learning and internalization of self-organization principles by farmers to make the economic advantages of cooperatives possible ([Section 5](#)).

2. Agricultural cooperatives and institutional compatibility

2.1. Rebuilding agricultural cooperatives in post-socialist countries

The theory of agricultural cooperatives indicates that by freely self-organizing in cooperatives based on common interests and needs, independent farmers and other concerned parties can minimize transaction costs and strengthen farmers’ bargaining positions in market ([Sexton and Iskow, 1988](#); [Cook, 1995](#); [2018](#); [Valentinov, 2007](#); [Grashuis and Su, 2019](#)). It is also argued that membership in a cooperative facilitates development of social values, such as of self-help, democracy, equity, openness, social responsibility, and caring for others ([ICA, 2016](#)). However, the genesis of cooperatives in post-socialist countries with extended period of communism legacy contrasts to that of “Western world”. A Soviet-style approach to agricultural policy via forced collectivization distorted the core meaning of collective action and cooperation among land users in these countries ([Grancelli, 2011](#); [Hagedorn, 2014](#); [Lerman et al., 2016](#)). Although, post-socialist European countries moved rather quickly to implement reforms in building market-oriented institutions and establishing property rights, the process of restoring social capital and trust towards the concept of cooperative has been lengthy and is still ongoing ([Bijman et al., 2012](#); [Mike and Megyesi, 2018](#); [Möllers et al., 2018](#)). For example, the market share of cooperatives in the horticulture sector in Poland (11%), Hungary (18%), and Romania (0%) is still well below the average across the European Union (42%) ([Bijman et al., 2012](#)). To overcome the barriers related to the past experience, the studies highlight that long-term legal-economic and advisory support by the state, as well as capable leadership are the key factors in the emergence of agricultural cooperatives in post-socialist countries of Central and Eastern Europe ([Hagedorn, 2014](#); [Wolz et al., 2020](#)).

Similarly, the literature indicates that in the countries of the former Soviet Union, with farmers having little or no incentive to engage in collective action, authorities tend to opt for top-down policy measures to establish agricultural cooperatives ([Golovina and Nilsson, 2011](#); [Kurakin and Visser, 2017](#); [Wolz et al., 2020](#)). The distinctive features of the top-down approach observed in these countries are the focus on the execution of policy-makers’ intentions; initial statement of purpose; implementation with clear lines of authority and enforcement of norms. Studies on the top-down facilitation of the cooperatives in the post-Soviet countries (e.g., Russia and Central Asia) point at the significant role of the state in the development of cooperatives, which are mostly understood as production ones ([Lerman et al., 2016](#)); the unwillingness of farmers to actively participate within cooperatives ([Golovina and Nilsson, 2011](#)); and the crucial role of the continuous budgetary support for the survival of the cooperatives ([Kurakin and Visser, 2017](#); [Yanbykh et al., 2019](#)). However, the outcomes of the top-down facilitated efforts proved to be not optimistic so far, which is understandable as state-dominated cooperatives have a prominent history of failure. This is reported to be, not least, due to the disregard of farmers’ perspective towards (i) the idea of agricultural cooperatives overall; (ii) key actors involved in shaping the broader institutional environment of the cooperatives such as state authorities and buyers; as well as (iii) legal-economic terms and conditions of establishing and operating a cooperative (e.g., [Lerman, 2013](#); [Wolz et al., 2020](#)).

Compared to the state-controlled forms of agricultural organization, scholars generally argue for the institutional environment that supports voluntary forms of agricultural cooperatives (e.g., [Shiferaw et al., 2011](#); [Lerman and Sedik, 2014](#)). At the same time, learning and experiences of more independent decision making is thought to contribute to the empowerment of farmers, in turn making them less reliant on external actors, especially the state, and more resilient in dealing with dynamic challenges ([Kötter, 1994](#); [Birchall and Ketilson, 2009](#); [Rakopoulos, 2014](#)). It is therefore reasonable to expect that fundamentally changing the approaches and practices established during the Soviet times in the agricultural sector and beyond, which shaped at least two-three

generations of farmers and decision-makers, will take considerable time and learning (Soliev and Theesfeld, 2020).

2.2. Historical-institutional background to agricultural cooperatives in Uzbekistan

Two institutional conditions can be highlighted in the agriculture of the post-Soviet Uzbekistan that are particularly relevant from the perspective of establishing agricultural cooperatives. First, agricultural land in Uzbekistan is the state property (Lerman, 2008; Djanibekov et al., 2012). Farmers can lease the land from 30 to 50 years, according to the national Law (1998) “On Peasant Farms”. The lease rights are not transferrable to third parties and cannot be used for sale or sublease. In order to “optimize” resource use, the state has been implementing “land optimization” policy to reallocate land among farmers every 3–4 years since 2008 with the last one in early 2019, resulting in the changes in the number of farmers (Zorya et al., 2019). Second is the dominant role of the state in agriculture. Although state-initiated reforms have shifted land use rights from collective large-sized farms to individual farms and smallholders (Lerman and Sedik, 2018; Zorya et al., 2019), the state retained a tight control over the production of crops in the farmlands, resorting to regulatory instruments such as state quota and crop placement plans (Veldwisch and Spoor, 2008; Djanibekov and Finger, 2018).

The history of attempts to establish some forms of cooperatives in Uzbekistan dates back to the Soviet period, from which, after gaining independence in 1991, Uzbekistan inherited *kolkhozes* – collective farms with a relatively pure state-control (Ilkhamov, 1998; Veldwisch and Spoor, 2008). Adoption of the Law (1998) “On Agricultural Cooperative (Shirkat)” launched the transformation of the *kolkhozes* into *shirkats* – a form of an agricultural organization based on the production contracts with small family farms, who could lease land from *shirkats* for 3–5 years (Schoeller-Schletter, 2008; Veldwisch and Spoor, 2008). Over time *shirkats* were reported to be inefficient due to lack of members’ motivation, state interference into *shirkats*’ management, and poor mechanisms of state financing and pricing of the production (The Center for Economic Research, 2004). Consequently, the state launched another land reform in 2004, which led to the dismantling of the *shirkats* and distribution of their land to individual farmers. The transformation of the *shirkats* was accompanied with the establishment of agricultural firms (*agrifirm*) – a commercial organization to be voluntarily founded by individual farmers (Decree, 2006). *Agrifirm*’s work was based on individual contracts with its members for the sale of products and provision of production-related and marketing services, while helping the members increase their export potential.

Against this background, the Decree of the President of Uzbekistan from 14 March 2019 (Decree, 2019) signaled an important turn. Cooperative was proclaimed as a preferred organizational form in the agriculture. The main official objectives of the policy are the development of the value chains of sustainable production and export of the competitive products in agriculture. The new Decree (2019) states that land users can establish and join cooperatives on a voluntary basis. Unlike the foregoing state policies on *shirkats* and *agrifirms*, this policy distinguishes two new incentives to make cooperatives attractive for farmers. First, the land of the cooperative members shall be exempt from further state expropriation and land reallocation reforms. Second, farmers, as members of cooperatives, are entitled to independently determine their crop structure, land allocation and production targets starting from 2020.

Based on these observations, our study both theoretically and empirically addresses the following question: how can existing institutional conditions affect the development of agricultural cooperatives in a transition country such as Uzbekistan? Answering this question is important as the literature, especially at the intersection of institutional compatibility in transition countries and agricultural cooperatives, is scarce, while studies on Uzbekistan lack empirical evidence that particularly takes the farmers’ perspective.

3. Methodological approach

3.1. PICA: Policy classification, actors, and CIAs

The study uses an exploratory case study approach (Yin, 2018), particularly following the Procedure for Institutional Compatibility Assessment (PICA) (Theesfeld et al., 2010; Amblard and Mann, 2011; Mandryk et al., 2015; Theesfeld and Jelinek, 2017). In order to understand the institutional compatibility of a policy, as a first step, we analyzed the broader historical-institutional background to the introduction of the policy on agricultural cooperatives in Uzbekistan (Section 2). The new Decree (2019) was then analyzed following PICA, which proposes to distinguish three types of intervention – regulatory, economic, and advisory/voluntary, and to contrast them with the area of intervention – hierarchy, market, and self-organized networks. Various combinations between the types of intervention and the areas of interventions can already provide information about the compatibility of a new policy with the broader institutional environment. As will be outlined later, what we study here is a regulatory intervention addressing voluntary governance structures. To understand the compatibility of the policy from the perspective of the involved and affected actors, PICA then focuses on identifying the key actors. In the presented case study, we can identify the following types of relevant actors: representatives of state authorities, farmers, and heads of cooperatives, who simultaneously act as intermediates in finding buyers/exporters. While some of the buyers/exporters are considered an external actor to cooperatives, some are registered as members. There is another group of actors who support the policy by providing expertise and development assistance – international donors and organizations.

Finally, PICA analyzes crucial institutional aspects (CIAs), combining the theoretical considerations with the empirical data. Institutional aspects encompass formal and informal rules in use or perceptions of actors that potentially facilitate or hamper policy implementation (Theesfeld et al., 2010). Formal institutional aspects could include formally issued and written policy terms and instruments, as well as existing legal framework (e.g., Stupak, 2016: 87). Informal institutional aspects could include non-written or not official but well-established practices among actors, as well as perceptions about what actions are considered acceptable and whether other actors are considered trustworthy. Based on theoretical considerations and keeping in mind the policy terms and goals, its area of impact and affected actors (Decree, 2019), we explored the library of the CIAs (Schleyer et al., 2007). The specification of the policy type as regulatory one, addressing voluntary governance, enabled us to select from the initial library those CIAs that are related to the state support for farmers, bargaining power of farmers, property rights and perceived economic benefits of farmers, and trust of the farmers towards other key actors (Table 1). Case-specific crucial aspects, such as “trust of farmers towards an exporter”, “presence of an exporter”, and “improved access and use of water”, are CIAs that have been elaborated and adapted together with experts which reviewed and gave feedback on the initial list of CIAs. Following PICA, the adapted CIAs were then discussed with and ranked by the key actors in the selected locations.

3.2. Study locations, data collection and analysis

The case study locations were selected based on Decree (2019), which outlined the exact provinces and districts where new cooperatives had to be established: Bulungur and Urgut districts of Samarkand province and Qibray and Parkent districts of Tashkent province. The agriculture in these provinces specializes mostly in the production of fruits, vegetables, grape, and wheat. We can observe the importance attached to the cultivation of food crops in these provinces by comparing it with the state-ordered cotton. In contrast to the nationwide share of cotton area, which is 37% of total sown area, it accounts for only 25% of total sown area in these two provinces, placing them into the category of

Table 1
CIAs identified as relevant to policy on agricultural cooperatives in Uzbekistan.

Groups of CIAs in relation to farmers	#	CIAs	Assuming a facilitating (+) or hampering (-) role in the implementation of the Decree to establish cooperatives
State support for farmers	1	Information on policy	Information on policy is distributed among actors timely and fully (+) or not (-).
	2	Government support for farmers	Special incentives make farmers consider joining (+) cooperatives or not (-).
	3	Capacity of the authorities to enforce the policy	State authorities can facilitate (+) or hamper (-) the promotion of cooperatives.
Bargaining power of farmers	4	Certainty of membership terms	Farmers are able to negotiate the terms and conditions of their membership in cooperatives (+) or not (-).
	5	Presence of an exporter	Presence of an effective exporter can motivate farmers to join cooperatives (+).
Property rights and perceived economic benefits of farmers	6	Secure land rights of farmers	Land rights of the farmers can be enhanced (+) or compromised (-) within cooperative.
	7	Improved access and use of water by farmers	Water rights of the farmers can be enhanced (+) or compromised (-) within cooperative.
	8	Expected farmers' income increase	The sale and export of products within cooperative can increase (+) or decrease (-) farmers' income.
Trust of farmers towards key actors	9	Trust of farmers towards the state authorities	The degree of trust towards the state can positively (+) or negatively (-) impact the policy.
	10	Trust of farmers towards an exporter	The degree of trust towards an exporter can positively (+) or negatively (-) impact the decision to join cooperatives.

top three regions with the least share of cotton area among all 13 regions in the country (Zorya et al., 2019). The share of the cotton is in decline, and Samarkand and Tashkent provinces together continue to make a substantial contribution to the total national production of fruits (16% in 2019), vegetables (25%), grape (42%), and grain (18%) (The State Committee of the Republic of Uzbekistan on Statistics, 2020), naturally making them among the first for consideration of more efficient forms of organization.

Field visits were carried out in the summer and fall of 2019. Due to the exploratory nature of the research, the study followed the purposeful sampling approach to identify relevant actors and continued until theoretical saturation was reached (Bryman, 2016). As a result, semi-structured interviews were conducted in total with 22 actors relevant to the policy on cooperatives (out of total 27 approached, response rate=81%):

- members of cooperative: farmers (n = 11²): four from Parkent, three from Qibray, and four from Bulungur district;
- the chairpersons of cooperatives (n = 6): one from Parkent, three from Qibray, and two from Bulungur district;
- representatives of state and local authorities involved in the implementation of the cooperative policy (n = 2);
- experts: representatives of local offices of the World Bank, German Public Association for International Cooperation (GIZ), and French Public Agency for the Development of International Cooperation in

the Areas of Agriculture, Food and Rural Space (ADECIA) who consulted the government in the development of the new policy on agricultural cooperatives (n = 3).

The questions of the semi-structured interviews were dedicated to (a) relevance and (b) relative importance of CIAs for implementation of the policy on agricultural cooperatives (Appendix 1). Following an in-depth interview on identified CIAs, we asked respondents to rank the ten CIAs against one another on the scale of 1 (least important) to 10 (most important). Respondents had a choice to give the same rank to several CIAs when they thought that they bore equal importance. In total 19 respondents (out of 22) agreed to rank the CIAs: farmers – nine, chairpersons of cooperatives – six, representatives of state authorities – two, experts – two.

For an in-depth understanding of the formal process, we have also collected official documents pertaining to the establishment of the cooperatives: (i) resolutions of the local state authorities, both on provincial and district levels; (ii) protocols of the meetings held by the local state authorities related to the establishment and development of the agricultural cooperatives; and (iii) internal documents of the cooperatives such as the Charters and certificates of registration. The goal was to ensure that the context and details of the policy unrolling process were correctly understood.

We analyzed the data from interviews mainly qualitatively by applying thematic analysis (Mayring, 2014; Bryman, 2016). We coded the data according to the crucial common themes as well as key similarities and differences in expressed views related to the policy implementation. We continuously cross-validated our findings with the key informants and existing evidence in literature throughout the research. Individual rankings of CIAs were aggregated to understand the emerging trends. In deriving aggregated results, we gave each respondent's ranking the same weight and integrated two specific empirical lessons learned during the field research. We observed that first, the respondents were relatively confident in ranking the first three most important CIAs, and second, they were often not confident in prioritizing one CIA over others with regard to top three. Thus, we aggregated the individual rankings according to their inclusion in top three, allowing us to identify emerging clusters of CIAs from the most to the least important ones as perceived by the respondents. We triangulated this method with a simple total score method and comparison of medians (see Appendix 2). Two key informants with extensive experience and insider knowledge of agricultural reforms (representatives of local authorities) were interviewed on a recurring basis during the entire field research to verify emerging findings.

The following section presents and discusses the findings of our analysis focusing on the overall compatibility and process of the policy implementation, and in-depth insights from the discussions and ranking of CIAs.

4. Results and discussion

4.1. Overall compatibility, process, and speed of policy implementation

Applying PICA to the analysis of Decree (2019) and distinguishing three types of intervention – regulatory, economic, and advisory-voluntary, we see that the policy on the agricultural cooperatives in Uzbekistan falls into regulatory type of intervention, since it authorizes state bodies to directly supervise the establishment of the cooperatives. Further, by directly identifying the exact locations of cooperatives with no prior consultation with farmers, the policy can be classified as excessively regulatory, since the decisions of the farmers to join a cooperative are fully pre-defined by the authorities. By its area of intervention, the policy stipulates the creation of a new legal form of agricultural production and the enhancement of the farmers' property rights. These two combined can have an impact on the markets. At the same time, cooperatives, in essence, are or are expected to become

² Two of the farmers were also exporters.

self-organized networks. Thus, the aims of the Decree (2019) are to impact markets, and create self-organized networks using an excessively regulatory intervention, which in itself is a sign of incompatibility (Theesfeld et al., 2010).

The process of establishing cooperatives on the lower governance levels likewise continued following a hierarchical order, in which respective governors (*khokims*³) in provincial and district levels issued their orders to legally enforce the establishment of cooperatives. The process was extremely quick. The speed of the policy implementation can be illustrated in the example of Qibray district, Tashkent province. In order to enforce the policy after the issuance of the Decree (2019) on 14 March, the Tashkent provincial *khokim* issued Resolution (2019a) on 22 March, followed by Resolution (2019b) of Qibray district *khokim* on 28 March. All nine cooperatives in Qibray district were registered on 17 April 2019. The process followed a similar procedure in the Bulungur district of Samarkand province. Local district administration (*khokimiyat*) held the meeting and issued the Protocol Decision (2019) on the establishment of cooperatives on 27 March. Further, two cooperatives were registered already on 9 and 10 April 2019, respectively. Already three months after Decree (2019) was issued, official data show 22 agricultural cooperatives registered in Tashkent province and four in Samarkand province (Table 2).

The distribution of cooperatives is uneven between provinces. A large proportion of cooperatives was registered in Tashkent province. Cooperatives were established within administrative borders of the communities in the districts. Thus, one cooperative per community. However, whereas in two selected districts of Tashkent province cooperatives were formally established in most of the communities, in Bulungur and Urgut districts of Samarkand province, the cooperatives were established only in two communities in each district, out of 16 and 25 respectively. The representatives of local authorities explained that as an experiment they chose communities where presumably farmers had better financial conditions (i.e., lack of debts) than in others.

In all of the cooperatives, local district *khokims* de-facto appointed heads of the cooperatives that farmers had to approve formally. As was stated above, each district has a certain number of communities. Each community has an informal leader of the farmers, who often also used to be the head of the *shirkat*, then of the *agrifirm*, and is responsible for enforcement of the orders of authorities among farmers. All interviewed chairpersons of cooperatives used to be the heads of the *agrifirms*.

Cooperatives are registered as production cooperatives and share a standard Charter with the similar provisions. Lerman (2013) points out that in the post-Soviet domain production cooperatives in essence are the hybrid of production and service cooperatives, which is the case for new cooperatives in Uzbekistan. The Charter specifies terms and con-

ditions of the membership, including the amount of a one-time membership fee. The amount of fee is calculated per hectare of leased land and varies among cooperatives. For example, in the cooperative “Gren Agro Zarafshon” (Bulungur district, Samarkand) the amount per hectare was 200,000 Uzbek Sums (UZS) (equivalent to 24 USD⁴), thus if the farmer has 20 ha of land then he or she has to deposit four million UZS (about 500 USD). Another cooperative “Choyantepa Chorbog” in the same district set 300,000 UZS (equivalent to 36 USD) per hectare as the basis for calculating the membership fee. Cooperatives in Bulungur district had bank accounts at the time of the field study and started collecting membership fees from farmers. However, cooperatives in Tashkent province not only could not collect membership fees, but most of them had not opened bank accounts as of the time of field visit (five months after the formal establishment of the cooperatives).

4.2. Perception of CIAs by key actors

4.2.1. Actor ranking of CIAs

Analyzing the results of the survey (see Appendix for details), we identified the relative importance of CIAs as perceived by the respondents (Fig. 1). Generally, the results reflect the nature of the state-designed policy as the respondents ranked the importance of the state-related CIAs particularly high.

Particularly, the first three CIAs, deemed most important by the respondents, highlight the perceived role of state. It is in accordance with the literature, which suggests that the outcomes of the policy interventions depend on the communication of information, farmers’ trust towards state, and authorities’ capacity to streamline the process of cooperatives’ promotion (e.g., Hanel, 1994; Juntti and Potter, 2002; Bijman et al., 2012; Lerman, 2013). Only then comes the cluster of CIAs highlighting the economic conditions – expected income increase, government support for farmers (in the form of incentives), trust towards buyers and presence of buyer at all – which some of the economic literature stresses as the most important (e.g., Sexton and Iskow, 1988; Hagedorn, 2014). The ranking also identifies a clear cluster of CIAs perceived as least important by the respondents on aggregate – secure land rights of farmers, certainty of membership terms, as well as improved access and use of water.

Interestingly, two experts who ranked the CIAs had relatively similar views on the importance of almost all CIAs (difference in ranking ranging between 1 and 3) (Fig. 2). From these, compared to aggregate results from all respondents, the higher importance attached by the experts to the secure land rights stands out, corresponding to the literature that increasingly views secure land tenure as one of the most important factors in agricultural reforms (Hare, 2008; Deininger and Jin, 2009; Hodgson, 2015; Di Falco et al., 2020). Experts greatly diverged in their ranking of “capacity of the authorities to enforce the policy” (difference in ranking = 8). One of the experts seemed to take a more “realist” view, believing that the capacity of the authorities was much less relevant, since under the conditions of the historically dominant top-down approach cooperatives would be formally established in any case, thus what happens after was more important (Fig. 2: Expert 1). The other expert stressed the importance of the authorities’ capacity already at the outset by carefully planning and implementing the policy for the emergence of “true” cooperatives (Fig. 2: Expert 2). The clash between these two views seems to uncover the genuine challenge in introducing new policies as to when and with whom a change should start, and whether the state authorities likewise have to change their approach even when the farmers are the target of the policy.

Finally, a simple comparison of the rankings by farmers between the two provinces (see Appendix) shows that medians for six CIAs did not

Table 2

Number of established cooperatives and their members in Uzbekistan, 1 July 2019.

Indicators	Tashkent	Samarkand	Total for two provinces
Number of established cooperatives	22	4	26
Number of farmers, members of cooperatives	731	181	912
Number of smallholders, members of cooperatives	466	391	857
Number of exporters, members of cooperatives	14	3	17
Total number of members	1211	575	1786

Source: Ministry of Agriculture of the Republic of Uzbekistan (2019)

³ *Khokim* – head of the local state administration.

⁴ Official exchange rate of the Central Bank of Uzbekistan as of 15 April 2019, 1 USD = 8 451.4 UZS. URL: <https://cbu.uz/en/>

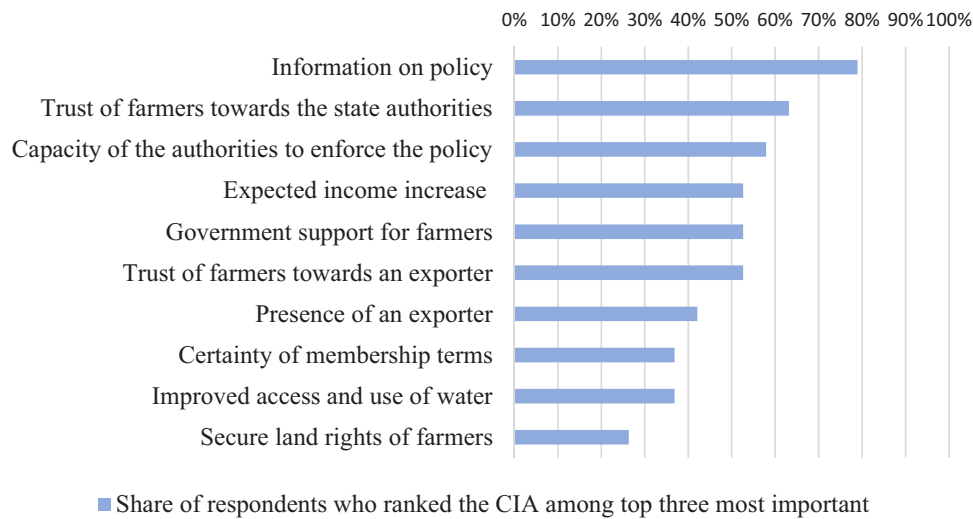


Fig. 1. CIAs ranked by their inclusion to the top three most important ones. Note: 19 respondents in total; respondents had a possibility to give the same rank to more than one CIA.

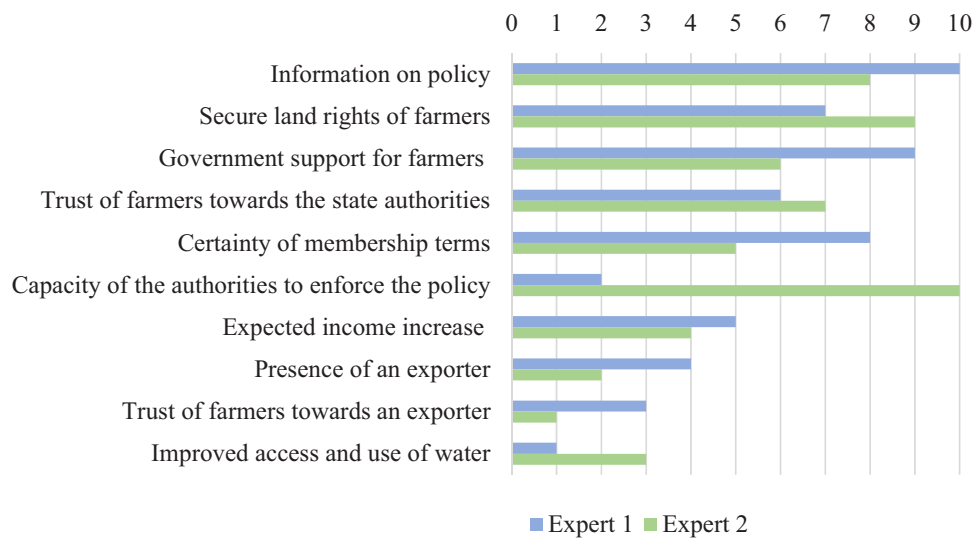


Fig. 2. Ranking of CIAs by two independent policy experts. Note: ranked on a scale from 1 (least important) to 10 (most important).

differ by more than 3 points, and that two CIAs – presence of an exporter and secure land rights – were ranked by Samarkand respondents as considerably more important (medians = 8.5 and 7 out of 10 respectively) than Tashkent respondents (medians = 1 and 1 respectively). This brings forward the debate on the role of center and periphery in identifying the influence of state. One explanation could be that these non-state related CIAs seem to be perceived as more important ones due to more distant location of these cooperatives from the center (capital). Likewise, there is a moderate but still noticeable difference (4) in ranking of two other CIAs – certainty of membership terms and improved access and use of water, again for Samarkand these two being more important. We should treat these results with caution and for exploratory purposes, as the sample is small and non-probabilistic. Yet, the patterns with stark differences should not be ignored and investigated further. Thus, the question of causal relationships that can explain why we see these differences remains to be explored.

4.2.2. Information asymmetry on cooperatives policy by actors

New policy initiative implies new information that actors shall possess, and the access to the information and knowledge on the policy might be particularly important during the initial phases of policy

implementation as here the new rules on how cooperatives will work are established. While actors considered “information on the policy” the most important CIA (Fig. 1), we observed a distinct information asymmetry among actors. All interviewed farmers (n = 11) acknowledged that they had not had any information on the new policy before the official issuance of Decree (2019). In addition, only one farmer stated that he had read the full text of Decree (2019) after its publication (Interview 18, Samarkand). Local authorities reported that in all provinces they had organized meetings for farmers to explain the meaning of the policy on cooperatives. As farmers explained, during those meetings they had learned that cooperatives would help them with the sale and export of the products, as well as with provision of facilities for storage and processing of the products.

Further, the interviews revealed that each of the two key actor groups – farmers and local authorities – viewed the other one as responsible for action. Most of the interviewed farmers (n = 9) expressed the opinion that it was responsibility of the cooperatives to help with the production and sale of products, implying that they viewed a cooperative as an entity external to them. Representatives of the local authorities in formal interviews (n = 2) and in informal short conversations indicated that farmers did not understand the benefits of

cooperation and that they were unwilling to cooperate with each other. The recurring theme in the interviews with the representatives of the local authorities was that farmers were not yet capable to work for common good and therefore needed a strong supervision or otherwise would face a learning curve too steep to overcome on their own.

A half of the interviewed chairpersons of cooperatives ($n = 3$) had preliminary information about the policy prior to its official adoption. The cooperative chairpersons are de-facto integrated into the local authority hierarchy and serve as implementers of *khokimiyat*'s policy within the geographic area of their responsibility. All of them had some understanding of the policy and concept on cooperatives, though only half of them reported to have read the full text of Decree (2019). They understood cooperative as a platform to unite farmers and support them with the production, sale, and export of products, which was similar to how farmers understood cooperatives in general, too. However, their responses indicated that they saw the policy rather through the prism of state interests, viewing cooperatives as something that had to be done because of the new decree, as well as the order from the *khokimiyat* to implement that decree.

The interviewed experts also expressed their concern with the lack of information and knowledge about cooperatives among state actors both at local and state levels. In 2019, in partnership with the Ministry of Agriculture of Uzbekistan, German Public Association for International Cooperation (GIZ) and French Public Agency for the Development of International Cooperation in the Areas of Agriculture, Food and Rural Space (ADECIA) organized and conducted several seminars for local farmers, chairpersons of cooperatives, and representatives of local departments of agriculture in order to address the knowledge gap. One of the experts observed in a seminar that not only farmers, but also local officials themselves had a limited knowledge and understanding of cooperatives and were preoccupied with technical questions such as the legal registration of the cooperatives, management of cooperative assets, taxation of the cooperatives, etc. The expert from ADECIA suggested that there should be trainers in each location with a cooperative to continuously raise awareness of local actors about cooperatives.

From the low awareness among actors about cooperatives and the policy, as well as the diversity of perceptions towards who should be responsible for cooperatives, we can see a serious mismatch between state's intentions and local authorities' and farmers' perceptions of those intentions.

4.2.3. Incompatible understanding of state's role with policy goal

Given the state's desire to achieve policy goals on the one side and rather indifferent farmers on the other side, the state authorities seem to continue resorting to administrative methods under pressure to produce quick results. One could argue that in countries where centralized state had historically been the only source of reform, it is the only option that the state "knows how to apply" even when it initiates a bottom-up form of governance reforms. It is indeed concerning that cooperatives, which by their nature call for self-organization, both in the academic literature (e.g., Sexton and Iskow, 1988; Cook, 1995, 2018) and in Decree (2019) itself, are implemented with a clear role of *khokimiyats* and their representatives as dominant actors, which in turn seems to be reinforcing the paternalistic views among farmers that the state is solely responsible for the cooperatives.

The official state support measures described in Decree (2019) do not include direct financial support of the cooperatives, and that was reported as the primary reason for farmers to generally view the incentives within the policy as insufficient. Farmers, chairpersons of cooperatives and representatives of local authorities appeared to be in agreement that the state should provide financial support in developing the hard infrastructure of the cooperatives (e.g., processing and storage facilities, access to machinery) and linking farmers with exporters. Their explanation for these expectations was that since it was a state-facilitated policy then it was only natural that the state should be the one to create financial conditions for its successful implementation. This is in

direct contradiction to the empirical lessons and theoretical considerations in the existing literature (Hanel, 1994; Kötter, 1994). An excessive regulatory intervention combined with a strong budgetary support will prevent farmers from relying upon themselves and gradually building interest in self-organization and governance. The literature unambiguously questions such strong state-interventions that make cooperatives' survival dependent on external coordination and support (Deng et al., 2010; Shiferaw et al., 2011; Lerman, 2013; Kurakin and Visser, 2017).

The experts ($n = 2$) from World Bank and ADECIA had an opportunity to participate in the discussion of the draft of Decree (2019) prior to its official adoption with government officials. While highlighting the important role of state as a facilitator of change (as discussed earlier), one of their main concerns was that it was not advisable to establish cooperatives through top-down regulatory instruments such as a decree and order, especially within a short timeframe. According to them, in addition to leaving little time for learning, such an approach would eliminate the opportunity of deciding to join a cooperative based on an economic rationale. Perhaps a solution in this case could be that state intervenes rather actively only at the beginning and only to create the necessary facilitating legal framework as well as various economic and advisory platforms (e.g., markets, forums, trainings, study visits) (e.g., Villamayor-Tomas et al., 2019) to learn about cooperatives and their advantages, but subsequently, as Kötter (1994: 801) put it, "[t]he state should withdraw as soon as possible". Otherwise, there is a real risk that the new cooperatives turn into yet another new name with little substantial change as it happened to *shirkats* and *agrifirms*.

4.2.4. Farmers' indifference towards tenure rights and membership in cooperative

It is of particular interest that the main policy "carrot" in the form of enhanced land rights did not win much of the respondents' favor, who on aggregate ranked this CIA as the least important (Fig. 1). It was illuminating that interviewed farmers seemed to have already normalized the state intervention in the form of frequent land redistributions (Djanibekov et al., 2012; Zorya et al., 2019) and appeared as if they could not imagine a secure land tenure. Moreover, several chairpersons ($n = 4$) of the cooperatives assumed that cooperative would turn into some form of a collective farm in the future. All experts agreed on the importance of secure land tenure, but only one of them expected that the policy incentives related to protection of land rights would be important enough for farmers to join and remain in a cooperative (Interview-1, Tashkent).

Most of the respondents also downplayed the overall importance of the membership terms, which might be an aftermath of the imposed policy as "...top-down organization of cooperatives is widely assumed to discourage genuine member involvement" (Kurakin and Visser, 2017: 2). As it was mentioned, all cooperatives had a standard Charter, but none of the interviewed members (farmers) of the cooperative ($n = 11$) had read it. In addition, most of the farmers were not interested in the Charter, as one farmer put it: "They don't show us the Charter... and we were not interested in it" (Interview-19, Samarkand). Another farmer, also a de-facto member of a cooperative (Interview-22, Tashkent), provided a similar feedback about the membership terms and fee, stating he had not seen the Charter (at the time, six months after the establishment of a cooperative) and saying, "Well, this thing was long forgotten by everyone. No one asked us to pay. I would pay, but I don't see any result with the cooperative."

Somewhat contradicting to that, a half of the interviewed farmers ($n = 6$) indicated that they would negotiate the terms of the individual membership, arguing that they would not join a cooperative if the terms were not beneficial for them. Yet, all of them had already joined a cooperative without knowledge of the terms. This relative indifference of the farmers to cooperatives' formal membership terms could have its roots in general low importance attached to what is on paper, reported as particularly relevant for post-Soviet Central Asia (Soliev et al., 2017;

Klümper et al., 2018).

4.3. Conceptualizing the findings of institutional compatibility assessment

In summary, analyzing the cooperatives' policy measures through PICA helped to elucidate the key areas of policy (in-)compatibility with the existing institutional conditions. Overall, quick and excessively regulatory policy implementation failed to bridge the gap in facilitating the understanding of the policy by actors, reinforced farmers' paternalistic views on the role of state, and, consequently, resulted in the low interest and engagement of the farmers in cooperatives. Fig. 3 conceptualizes the results of the PICA and demonstrates the challenge of achieving the desired goal of self-organized networks and market of agricultural cooperatives with an excessively and exclusively regulatory policy intervention. The figure shows that such a setup is likely to result in (i) pseudo-cooperatives hampering self-organized networks and (ii) farmers' attitude that will keep them rejecting such initiatives. This calls for a more balanced policy intervention, where strong leadership makes a greater use of economic and advisory-voluntary instruments to break the inherent incompatibility of top-down governance traditions, re-establish the lost trust towards the notion of cooperatives, and there-with make the economic advantages of cooperatives (e.g., Deininger, 1995; Shiferaw et al., 2011; Lerman, 2013; Hagedorn, 2014) possible.

While these findings contribute to the existing literature by uncovering a specific challenge of creating voluntary networks by an order, the small sample size of respondents can be seen as a limitation. Yet, this sample size, combined with the analysis of policy documents, continuous cross-validation with key informants, and the authors' own expertise related to the region, provided the theoretical saturation necessary to reveal in-depth details of policy rollout described above. Future research with larger samples is needed to delineate in fine margins to what extent farmers hold different views on the certain institutional aspects for the success of the policy.

5. Conclusion

In places where state has been historically the most dominant actor of all reforms, it can be particularly challenging to facilitate and maintain non-state forms of organization and governance such as agricultural

cooperatives. Applying the Procedure for Institutional Compatibility Assessment (PICA) to the example of the recent cooperatives reform in Uzbekistan, we revealed how exactly establishing agricultural cooperatives by decree, resorting to strong top-down state-dominated mechanisms of governance, might be seen as necessary to start such a reform but could be counter-productive to the very idea of establishing a cooperative. This study shows that the role of the state is particularly important, as past and ongoing experiences of farmers form expectations that the state should play the most active role and even be responsible for implementation of the cooperative policy. One example is seen in the fact that virtually all farmers joined the cooperatives without the awareness of terms and conditions, fully relying on the instructions to do so by local authorities. Further, identifying the Crucial Institutional Aspects (CIAs) and analyzing the perceptions of key actors related to CIAs also pinpointed key areas that need to be strengthened for the policy to achieve its goals: information on the policy, farmers' trust towards the state, and the capacity of the authorities. Concerning is also that, while the literature and experts agree on high importance of secure land tenure for the success of agricultural cooperatives, farmers considered it least important, for which the historical "normalization" of ad-hoc state-led land redistribution practices seem to be a plausible explanation. Hence, the empirical evidence calls for caution in state's influence and is in line with the literature that suggests that although a strong leadership by the state is necessary it should avoid excessive command and control and make use of legislative, advisory, as well as economic measures (e.g., information, awareness raising campaigns, fostering partnerships, tax reforms) (Shiferaw et al., 2011; Lerman, 2013; Villamayor-Tomas et al., 2019).

The case study from Uzbekistan, where the new government seems in favor of moving towards reforms supporting forms of self-organization such as agricultural cooperatives, also demonstrates a unique challenge of development. The case here is a country in transition with multiple generations raised in the strong Soviet and post-Soviet top-down traditions and one that is facing serious challenges related to reducing poverty (Asian Development Bank, 2020), particularly in rural areas (Spoon, 2018). Thus, the study brings forward the trade-off between producing quick results under the pressure to achieve development objectives and creating conditions for learning with less regulatory interventions in a historically top-down institutional environment. The

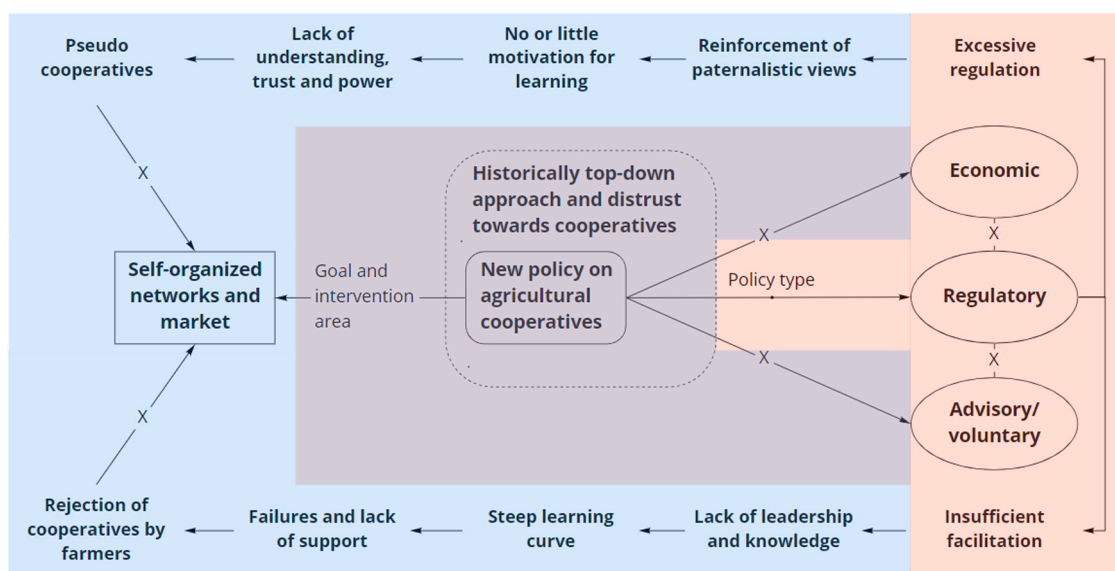


Fig. 3. Conceptualizing the results of the institutional compatibility assessment of the policy on agricultural cooperatives in Uzbekistan (Decree, 2019). Note: colored backgrounds indicate perspectives of key actors - the state (red) and farmers (blue) - and their overlap (purple), rounded rectangles depict the fit between policy and context (dotted), ovals represent policy types, the rectangle is the desired outcome, arrows indicate potential causal pathways, and the crossed arrows and lines show the absence of the link. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

current state practice on cooperatives seems to disregard cooperatives' inherent coordinating potential for solving state's failures (similar to potential of firms discussed by Williamson, 1971). In initiating unfamiliar forms of governance that are based on voluntary self-organization such as agricultural cooperatives, state authorities need to be ready that in the earlier stages of learning and experimentation the results (yields, resource use efficiency, and related socio-economic outcomes) are likely to deteriorate. This in itself will require learning also on the side of state authorities as it will be important that the state distinguishes farmers' learning curve from failure and does not intervene in ways that will reinforce the perception that a strong regulatory intervention is the only solution. Given that historically all key governance decisions related to agricultural organization were made by the state, farmers clearly need more time to learn how to become active in fundamentally new ways and to develop a culture of independence, self-help, and self-governance by fully making own decisions, starting with those on establishing or joining a cooperative. The key challenge and therefore the key policy recommendation is to facilitate conditions that will allow farmers to fully realize or even experience the economic benefits of joining forces, which first requires considerable time and financial investments but pays off later.

CRedit authorship contribution statement

Davron Niyazmetov: Conceptualization, Methodology, Investigation, Formal Analysis, Writing – Original Draft. **Ilkhom Soliev:** Conceptualization, Methodology, Formal Analysis, Writing - Review & Editing, Supervision. **Insa Theesfeld:** Conceptualization, Methodology, Writing - Review & Editing, Supervision.

Acknowledgments

The research was conducted within the framework of the SUSADICA (Sustainable Agricultural Development in Central Asia) project funded by the Volkswagen Foundation, Germany (Grant ID: 96 264). We are grateful to the interviewees for their time and valuable insights. Discussions with the participants of multiple workshops and meetings within the project have helped to improve the research.

Conflict of interest statement

The authors declare no conflict of interest.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.landusepol.2021.105538](https://doi.org/10.1016/j.landusepol.2021.105538).

References

- Amblard, L., Mann, C., 2011. Ex-ante institutional compatibility assessment of policy options: methodological insights from a case study on the Nitrate Directive in Auvergne, France. *J. Environ. Plan. Manag.* 54, 661–684.
- Asian Development Bank, 2020. Basic Statistics, Asia and the Pacific. Available at: (<https://data.adb.org/dataset/basic-statistics-asia-and-pacific>). Last accessed 22 June 2020.
- Bijman, J., Iliopoulos, C., Poppe, K., Gijssels, C., Hagedorn, K., Hanisch, M., Hendrikse, G., Köhl, R., Ollila, P., Pyykkönen, P., van der Slangen, G., 2012. Support for Farmers' Cooperatives; Final Report. Wageningen: Wageningen UR. Available at: (<https://library.wur.nl/WebQuery/wurpubs/fulltext/245008>). Last accessed 20 August 2020.
- Birchall, J., Ketilson, L., 2009. Resilience of The Cooperative Business Model in Times of Crisis (Sustainable Enterprise Programme/Responses to the Global Economic Crisis). International Labour Organisation, Geneva. Available at: (<http://hdl.handle.net/1893/3255>).
- Bryman, A., 2016. *Social Research Methods*, 5 ed. Oxford University Press, New York.
- Cook, M., 1995. The Future of US Agricultural Cooperatives: a neo-institutional approach. *Am. J. Agric. Econ.* 77, 1153–1159.
- Cook, M., 2018. A life cycle explanation of cooperative longevity. *Sustainability* 10, 1–20.
- Decree, 2006. On Measures to Deepen Economic Reforms in Horticulture and Viticulture. #3709, from 9 January 2006. Tashkent, Uzbekistan. Available at: (<https://lex.uz/ru/docs/967558>). Last accessed 5 June 2020.
- Decree, 2019. On Measures for the Development of Agricultural Cooperation in Horticulture. #4239, from 14 March 2019. Tashkent, Uzbekistan. Available at: (<https://lex.uz/ru/docs/4242012>). Last accessed 5 June 2020.
- Deininger, K., 1995. Collective agricultural production: a solution for transition economies? *World Dev.* 23, 1317–1334.
- Deininger, K., Jin, S., 2009. Securing property rights in transition: lessons from implementation of China's rural land contracting law. *J. Econ. Behav. Organ.* 70, 22–38.
- Deng, H., Huang, J., Xu, Z., Rozelle, S., 2010. Policy support and emerging farmer professional cooperatives in rural China. *China Econ. Rev.* 21, 495–507.
- Di Falco, S., Laurent-Lucchetti, J., Veronesi, M., Kohlin, G., 2020. Property rights, land disputes and water scarcity: empirical evidence from Ethiopia. *Am. J. Agric. Econ.* 102, 54–71.
- Djanibekov, N., Van Assche, K., Bobojonov, I., Lamers, J.P., 2012. Farm restructuring and land consolidation in Uzbekistan: new farms with old barriers. *Eur.-Asia Stud.* 64, 1101–1126.
- Djanibekov, U., Finger, R., 2018. Agricultural risks and farm land consolidation process in transition countries: the case of cotton production in Uzbekistan. *Agric. Syst.* 164, 223–235.
- Fadeeva, O., Soliev, I., 2020. Institutional analysis of land tenure system in post-socialist Russia: actors, rules and land use. In: Frühauf, M., Guggenberger, G., Meinel, T., Theesfeld, I., Lentz, S. (Eds.), *KULUNDA: Climate Smart Agriculture*. Springer, Cham, Switzerland, pp. 259–273.
- Golovina, S., Nilsson, J., 2011. The Russian top-down organised co-operatives – reasons behind the failure. *Post-Communist Econ.* 23, 55–67.
- Grancelli, B., 2011. Local development in the rural regions of Eastern Europe: post-socialist paradoxes of economic and social entrepreneurship. *J. East Eur. Manag. Stud.* 16, 31–53.
- Grashuis, J., Su, Y., 2019. A review of the empirical literature on farmer cooperatives: performance, ownership and governance, finance, and member attitude. *Ann. Public Coop. Econ.* 90, 77–102.
- Hagedorn, K., 2014. Post-socialist farmers' cooperatives in Central and Eastern Europe. *Ann. Public Coop. Econ.* 85, 555–577.
- Hanel, A., 1994. Policies for the promotion of co-operatives in developing countries. In: Dulfer, E. (Ed.), *International Handbook of Cooperative Organizations*. Vandenhoeck and Ruprecht, Göttingen, pp. 687–692.
- Hare, D., 2008. The origins and influence of land property rights in Vietnam. *Dev. Policy Rev.* 26, 339–363.
- Hodgson, G., 2015. Much of the 'economics of property rights' devalues property and legal rights. *J. Inst. Econ.* 11, 683–709.
- Iliopoulos, C., 2013. Public policy support for agricultural cooperatives: an organizational economics approach. *Ann. Public Coop. Econ.* 84, 241–252.
- Iliopoulos, C., Valentinov, V., 2018. Cooperative longevity: why are so many cooperatives so successful? *Sustainability* 10, 1–8.
- Ilkhamov, A., 1998. Shirkats, Dekhqon farmers and others: farm restructuring in Uzbekistan. *Cent. Asian Surv.* 17, 539–560.
- International Co-operatives Alliance, 2016. Guidance Notes to the Co-operative Principles. Available at: (<https://www.ica.coop/sites/default/files/publication-files/ica-guidance-notes-en-310629900.pdf>). Last accessed 6 November 2019.
- Juntti, M., Potter, C., 2002. Interpreting and reinterpreting agri-environmental policy: communication, trust and knowledge in the implementation process. *Sociol. Rural.* 42, 215–232.
- Klümper, F., Theesfeld, I., Herzfeld, T., 2018. Discrepancies between paper and practice in policy implementation: Tajikistan's property rights and customary claims to land and water. *Land Use Policy* 75, 327–339.
- Kötter, H., 1994. Self-help organizations and Third World Development. In: Dulfer, E. (Ed.), *International Handbook of Cooperative Organizations*. Vandenhoeck and Ruprecht, Göttingen, pp. 796–802.
- Kurakin, A., Visser, O., 2017. Post-socialist agricultural cooperatives in Russia: a case study of top-down cooperatives in the Belgorod region. *Post-Communist Econ.* 29, 158–181.
- Law, 1998. On Agricultural Cooperative (Shirkat). Tashkent, Uzbekistan. Available at: (<https://lex.uz/ru/docs/4855>). Last accessed 5 June 2020.
- Law, 1998. On Peasant Farms. Tashkent, Uzbekistan. Available at: (<https://lex.uz/ru/docs/275191>). Last accessed 5 June 2020.
- Lerman, Z., 2008. Agricultural development in Uzbekistan: The effect of ongoing reforms. Discussion Paper No. 7.08. Israel: The Hebrew University of Jerusalem. Available at: (<https://ageconsearch.umn.edu/record/37945/files/lerman-uzbek.pdf>). Last accessed 20 August 2020.
- Lerman, Z., 2013. Cooperative development in Central Asia. Policy Studies on Rural Transition. 2013–4. FAO Regional Office for Europe and Central Asia. Available at: (https://www.researchgate.net/profile/Zvi_Lerman/publication/305331178_Cooperative_Development_in_Central_Asia/links/5788d42208ae378efdda338c.pdf). Last accessed 20 August 2020.
- Lerman, Z., Sedik, D., 2014. Agricultural cooperatives in Eurasia. Discussion Paper No. 5.14. Israel: The Hebrew University of Jerusalem. Available at: (https://ageconsearch.umn.edu/record/290028/files/DP5_14_Cooperatives%20in%20Eurasia%20Mar%202014%202020_WEB.pdf). Last accessed 20 August 2020.
- Lerman, Z., Sedik, D., 2018. Transition to smallholder agriculture in Central Asia. *J. Agrar. Change* 18, 904–912.
- Lerman, Z., Sedik, D., Csaki, C., 2016. *Agricultural Cooperatives in Transition Countries*. LAP LAMBERT Academic Publishing, Saarbrücken, Germany.

- Mandryk, M., Reidsma, P., Kartikasari, K., van Ittersum, M., Arts, B., 2015. Institutional constraints for adaptive capacity to climate change in Flevoland's agriculture. *Environ. Sci. Policy* 48, 147–162.
- Mayring, P., 2014. *Qualitative Content Analysis: Theoretical Foundation, Basic Procedures and Software Solution*. Klagenfurt.
- Mike, K., Megyesi, B., 2018. Communities after markets. The long road of winemakers to self-governance in post-communist Hungary. *Geoforum* 88, 129–137.
- Ministry of Agriculture of the Republic of Uzbekistan, 2019. Statistics on the establishment of the agricultural cooperatives in Uzbekistan as of 01.07.2019. Tashkent, Uzbekistan. Electronic copy available from authors upon request.
- Möllers, J., Traikova, D., Bîrhală, B., Wolz, A., 2018. Why (not) cooperate? A cognitive model of farmers' intention to join producer groups in Romania. *Post-Communist Econ.* 30, 56–77.
- North, C., 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.
- North, C., 2005. *Understanding the Process of Economic Change*. Princeton University Press, Princeton.
- Ortmann, G., King, R., 2007. Agricultural cooperatives I: history, theory and problems. *Agrekon* 46, 18–46.
- Pistor, K., 2002. The demand for constitutional law. *Const. Polit. Econ.* 13, 73–87.
- Protocol decision #01/07-14 by the Khokim of Bulungur district of Samarkand province from 27 March 2019. "On The Presidential Decree #4239 from 14 March 2019". Bulungur district, Samarkand province, Uzbekistan. Electronic copy available from authors upon request.
- Rakopoulos, T., 2014. The crisis seen from below, within, and against: from solidarity economy to food distribution cooperatives in Greece. *Dialect. Anthropol.* 38, 189–207.
- Resolution of the Tashkent provincial Khokim #220 from 22 March 2019. On The Presidential Decree #4239 from 14 March 2019. Tashkent province, Uzbekistan. Electronic copy available from authors upon request.
- Resolution of the Khokim of Qibray district of Tashkent province #599 from 28 March 2019. On The Resolution of the Tashkent provincial Khokim #220 from 22 March 2019. Qibray district, Tashkent province, Uzbekistan. Electronic copy available from authors upon request.
- Schleyer, C., Theesfeld, I., Hagedorn, K., Aznar, O., Callois, J.-M., Verburg, R., Yelkouni, M., Olsson, J., 2007. Approach towards an operational tool to apply institutional analysis for the assessment of policy feasibility within SEAMLESS-IF. SEAMLESS Integrated Project EU 6th Framework Programme contract no. 010036-2.
- Schoeller-Schletter, A., 2008. Organizing agricultural production: law and legal forms in transition. In: Wehrheim, P., Schoeller-Schletter, A., Martius, C. (Eds.), *Continuity and Change: Land and Water Use Reforms in Rural Uzbekistan, Socio-Economic and Legal Analyses for the Region Khorezm*. Institut für Agrarentwicklung in Mittel-und Osteuropa (IAMO), Halle, Germany, pp. 17–42.
- Sexton, R., 1986. The formation of cooperatives: a game-theoretic approach with implications for cooperative finance, decision making, and stability. *Am. J. Agric. Econ.* 68, 214–225.
- Sexton, R., Iskov, J., 1988. Factors Critical to the Success or Failure of Emerging Agricultural Cooperatives. Division of Agriculture and Natural Resources, University of California, USA. Giannini Foundation Information Series, 88-3. (https://s.giannini.ucop.edu/uploads/giannini_public/3c/be/3cbe3e1c-7b9d-4f8b-ad50-887936216e0f/883-coops.pdf).
- Shiferaw, B., Hellin, J., Muricho, G., 2011. Improving market access and agricultural productivity growth in Africa: what role for producer organizations and collective action institutions? *Food Secur.* 3, 475–489.
- Soliev, I., Theesfeld, I., 2020. Benefit sharing for solving transboundary commons dilemma in Central Asia. *Int. J. Commons* 14, 61–77.
- Soliev, I., Theesfeld, I., Wegerich, K., Platonov, A., 2017. Dealing with "baggage" in riparian relationship on water allocation: a longitudinal comparative study from the Ferghana Valley. *Ecol. Econ.* 142, 148–162.
- Spoor, M., 2018. 25 years of rural development in post-soviet Central Asia: sustaining inequalities. *East. Eur. Countrys.* 24, 63–79.
- Stupak, N., 2016. Impact of agricultural transition on soil protection in Ukraine: the role of institutional change. *Land Use Policy* 55, 86–97.
- The Center for Economic Research, 2004. Reorganization of cooperative agricultural enterprises (shirkats) into farming business entities. Report. Tashkent, Uzbekistan. Electronic copy available from authors upon request.
- The State Committee of the Republic of Uzbekistan on Statistics, 2020. Main indicators of social and economic development of the Republic of Uzbekistan for 2019. Available at: (https://stat.uz/en/?option=com_content&view=article&id=2806&catid=181&lang=en-GB). Last accessed 20 August 2020.
- Theesfeld, I., 2019. The role of pseudo-commons in post-socialist countries. In: Hudson, B., Rosenbloom, J., Cole, D. (Eds.), *Routledge Handbook of the Study of the Commons*. Taylor & Francis, London, pp. 345–359.
- Theesfeld, I., Boevsky, I., 2005. Reviving pre-socialist cooperative traditions: the case of water syndicates in Bulgaria. *Sociol. Rural.* 45, 171–186.
- Theesfeld, I., Jelinek, L., 2017. A misfit in policy to protect Russia's black soil region. An institutional analytical lens applied to the ban on burning of crop residues. *Land Use Policy* 67, 517–526.
- Theesfeld, I., Schleyer, C., Aznar, O., 2010. The procedure for institutional compatibility assessment: ex-ante policy assessment from an institutional perspective. *J. Inst. Econ.* 6, 377–399.
- Tortia, E., Valentinov, V., Iliopoulos, C., 2013. Agricultural cooperatives. *J. Entrep. Organ. Divers.* 2, 23–36.
- Valentinov, V., 2007. Why are cooperatives important in agriculture? An organizational economics perspective. *J. Inst. Econ.* 3, 55–69.
- Veldwisch, G., Spoor, M., 2008. Contesting rural resources: emerging 'forms' of agrarian production in Uzbekistan. *J. Peasant Stud.* 35, 424–451.
- Villamayor-Tomas, S., Thiel, A., Amblard, L., Zikos, D., Blanco, E., 2019. Diagnosing the role of the state for local collective action: types of action situations and policy instruments. *Environ. Sci. Policy* 97, 44–57.
- Williamson, O., 1971. The vertical integration of production: market failure considerations. *Am. Econ. Rev.* 61, 112–123.
- Wolz, A., Möllers, J., Micu, M., 2020. Options for agricultural service cooperatives in a postsocialist economy: evidence from Romania. *Outlook Agric.* 49, 57–65.
- World Bank, 2020. Central Asia's Horticulture Sector - Capitalizing on New Export Opportunities in Chinese and Russian Markets. World Bank Group, Washington. Available at: (<http://documents1.worldbank.org/curated/en/533791576731672430/Central-Asia-s-Horticulture-Sector-Capitalizing-on-New-Export-Opportunities-in-Chinese-and-Russian-Markets.pdf>).
- Yanbykh, R., Saraikin, V., Lerman, Z., 2019. Cooperative tradition in Russia: a revival of agricultural service cooperatives? *Post-Communist Econ.* 31, 750–771.
- Yin, R., 2018. *Case Study Research and Applications: Design and Methods*, 6 ed. Sage publications, Los Angeles.
- Zorya, S., Djanibekov, N., Petrick, M., 2019. Farm Restructuring in Uzbekistan: How Did It Go and What is Next?. Working Paper. World Bank Group. Available at: (<http://documents1.worldbank.org/curated/en/202531549308782227/pdf/134322-RUSII-AN-WP-P162303-PUBLIC-Report-Farm-Restructuring-in-Uzbekistan-rus.pdf>). Last accessed 20 August 2020.