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**Regime shift, agriculture liberalization and the 2020 pandemic in
Uzbekistan: correlations and perturbations**

by Iroda Amirova and Etenesh Asfaw

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31th Virtual International Conference of Agricultural Economists

Organised Symposium on

The agricultural reform agenda in Central Asia: Progress and setbacks

Regime shift, agriculture liberalization and the 2020 pandemic in Uzbekistan: correlations and perturbations

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Abstract

Uzbekistan used to be one of the slowest reformers among the post-Soviet Central Asian countries. However, with a new president, the year 2017 stirred the country into a phase of dynamic reforms and faster liberalization. Several policy reforms took place, embedded in the National Development Strategy for 2017–2021. One of the major reforms resulted in the Strategy for the Development of Agriculture of Uzbekistan for 2020-2030. The Agricultural strategy focuses on diversification, modernization, land tenure questions, contract farming, economies of scale, and other topics in the sector. The current study analyses the agricultural liberalization path of Uzbekistan against the background of administrative shifts. More importantly, the paper analyses how far the perturbations triggered by the COVID-19 pandemic backpedalled the institutional change process in Uzbek agriculture. The analysis employs the theory of resilience and considers institutional change trajectories and the path dependence phenomena.

1. Introduction

The USSR's collapse in 1991 threw Uzbekistan and other Central Asian countries into the process of abrupt and involuntary decolonization and independence. Uzbekistan has been undergoing economic and political-institutional transformation ever since (Collins, 2002).

The farmland in Soviet Uzbekistan was under the control of 2048 state-owned farms (Acemoglu & Robinson, 2010), growing cotton. This bureaucratic land governance arrangement was disbanded as the land was distributed, and the farming sector was individualized after 1991 (Lerman & Sedik 2008). However, that did not mean farmers could act independently. Instead, the state introduced regulations (such as Uzbekistan's Cabinet of Ministers' Resolution #597, 1994) that determined what farmers could plant and the price they could sell it for.

The production of cotton and its prioritization after independence is part of path dependence in institutional arrangements. Cotton production in Soviet Uzbekistan recorded gains since the 1920s' collectivization (Lerman 1998). President Islam Karimov was already governing Uzbekistan when the country became independent. His regime preserved most Soviet economic and political institutions, including an inflated official exchange rate, currency controls, property arrangements and an enormous role for the state in industry and farming.

After 27 years of comparative institutional stagnation, things started to change with the new president in 2017. The country started a more active stage of transition. President Shavkat Mirziyoyev set about renovating the economy and initiated political reforms, although partially (The Economist 2019). Between 2017 and 2020, one could observe steady movements towards liberalized economic arrangements. However, with the global pandemic, the transition pace either delayed or even backpedaled the process in some instances.

Institutions in Uzbekistan has been changing since the collapse of the Soviet Union. Even if the change process has been slower during Islam Karimov's presidency years, it was happening against the claims that the county faced stagnation in institutional transition. We, in this paper, see that the changes across certain sub-dimensions of land institutions were taking place continuously. However, the speed of change with the arrival of a new president was faster. We are concerned that, though accelerated, the change process seems not to be sufficiently resilient because the change path backtracked after the global pandemic (COVID-19). This paper considers Uzbekistan's farmland tenure arrangements as a showcase for the incrementally changing institutions, perturbations and resilience.

The current paper analyzes the administrative shifts in Uzbekistan, the liberalization of the agricultural sector, and the global pandemic's role in the transition process through the lens of institutional and resilience theories.

Section two describes the theoretical framework of the paper. The following sections three and four outline our hypotheses and methods and data the paper uses in its analyses. The section five presents the results and provide respective supporting evidence for three phases of post-independent Uzbekistan's institutional change in the agricultural land tenure and the resilience of the transitional trajectory towards external shocks. Section six concludes.

2. Theoretical framework and literature review

Inclusive and extractive economic institutions

Economic achievements vary from country to country. Which institutions evolve and persist are the detrimental causes for such divergencies. Because the institutions influence how the economy works, they set the game's constraints and rules by influencing the incentives and motivating people (North, 1991; Bowles, 2004). Acemoglu & Robinson (2010) explain how the incentives created by institutions determine the prosperity and poverty of nations and how politics determines what institutions a country has. It provides examples of demotivation to adopt a technology due to the risk of being confiscated and taxed. These authors discuss how institutions change through political conflict and how the past shapes the present.

Institutions can be broadly categorized into two categories: inclusive and extractive. We refer to Acemoglu & Robinson (2010) while adopting the definition for these two key terms of our analysis. "***Inclusive economic institutions*** are those that allow and encourage participation by the great mass of people in economic activities that make the best use of their talents and skills and that enable individuals to make the choices they wish. To be inclusive, economic institutions must feature secure private property, an unbiased system of law, and a provision of public services that provides a level playing field in which people can exchange and contract; it also must permit the entry of new businesses and allow people to choose their careers" (pp. 74-75). Inclusive economic institutions require secure property rights and economic opportunities for a broad cross-section of society and not just for the elite (p75).

The institutions with opposite characteristics to the inclusive are ***extractive economic institutions***. The extractive institutions are intended to extract incomes and wealth from one subclass of society to benefit a different subclass (Acemoglu & Robinson, 2010: 76).

Inclusive and extractive political institutions

Politics is the process through which society chooses the rules that will govern itself. The political institutions are the rules governing incentives in politics. These institutions determine how the government is chosen and which body in the government has the right to do what. The political institutions define who possesses the power in the society and the targets toward which that power can be used. In case the power distribution is narrow and unconstrained, then the political institutions are absolutist. If the political institutions distribute power broadly in society and the power is limited, then such a setting is pluralistic. In pluralistic political, institutional settings, political power rests with a range of groups. Pluralistic political settings and inclusive economic institutions are intricately connected. Moreover, for a country to have a genuinely inclusive economic institution, the country also needs to have a sufficiently centralized and powerful state (government). So, ***inclusive political institutions*** are the ones that are adequately centralized and pluralistic (Acemoglu & Robinson, 2010: pp. 78-81).

Naturally, extractive economic institutions accompany extractive political institutions. Because under extractive political institutions, power is concentrated in the hands of narrow elite (e.g. clans, subgroups, families), and their power constraint does not exist or minimal. These elite subgroups of the population often establish the extractive economic institutions that enable them to extract resources from society. On the other hand, inclusive political institutions bestow power to the broader mass (p81).

Institutional change, path dependence, resilience, and informal institutions

The global literature acknowledges that the idea of persistence of some kind is virtually built into the very definition of an institution. This is true for sociological, rational-choice, and historical-institutional approaches alike. Differences in institutions and property rights have received attention in recent years.

Institutions not necessarily are optimally efficient but still could be ***persistent (resilient)*** over time. Once an institution is established, it evolves gradually in a ***path-dependent*** manner and tends to generate positive feedback. An institution can be segregated into three pillars: (1) regulatory – legal, (2) normative – prescribed and (3) cultural–cognitive (perception-understanding). Institutional ***change*** is a lumpy process, but if the change is classified across dimensions, it becomes possible to trace where the change occurs while which pillar is staying static. Consequently, if variation occurs in all pillars at once, that is called revolutionary change; if it is rather happening pillar by pillar over time, this change is evolutionary (Campbell, 2004). The scientific community argues that countries need better institutions with more secure property rights and less distortionary policies to grow. Transition into inclusive institutions with certain property rights take time and effort, and that the *change* towards both extractive and inclusive institutions occur ***incrementally*** (Campbell, 2004; Acemoglu & Robinson, 2010; Mahoney & Thelen, 2010).

Moreover, decision-makers (such as presidents) – having a crucial role in the process of change-often suffer from insufficient information about the problem (i.e. bounded rationality). Due to such constraints, they might refrain from sweeping policies that would lead to abrupt institutional changes. They prefer to make decisions resulting in *incremental variations* with respect to the institutional status quo. Meanwhile, such and similar changes accumulate and constitute evolutionary change (Campbel, 2004).

Seminal literature in *resilience* by Holling (1973) assumes that multiple locally stable equilibria characterize systems. Accordingly, the measure of a system's resilience in any local stability domain is the extent of the shocks it can absorb until the local stability domain is displaced into some other local stability domain. If we consider inclusive institutional setting as one local stable domain, then the extractive institutional setting is another local stable domain. The extent of those domains to absorb external shocks (e.g. COVID-19) determines those domains' *resilience level*.

Informal institutions in developing countries are important in the operation of interaction among individuals over different matters. The informal rules might become more pervasive arrangements when formal institutions fail as a tool of coordination of interactions (Casson et al., 2010).

Acemoglu et al. (2000) highlight that Europeans adopted hugely different institutions in different colonies. They indicate that many scientists believe that differences in institutions and state policies are at the root of significant differences in income per capita across countries. However, there is little agreement about what determines institutions and government attitudes towards economic progress, making it challenging to isolate exogenous sources of variation in institutions to estimate their effect on performance. The paper argues that differences in colonial experience could be a source of exogenous differences in current day institutions. However, the article does not imply that institutions today are predetermined by colonial policies and cannot be changed. Instead, the authors emphasize colonial experience as one of the many factors affecting institutional changes predetermined by colonial policies.

[The rule of law, private property right, expropriation risk](#)

Acemoglu et al. (2000) suggest that institutional features, such as *expropriation risk, property rights* enforcement, or the *rule of law* should be taken as an equilibrium outcome related to some more fundamental "institutions." That is, these are the fundamental features, which can be considered as benchmarks of inclusivity of institutions. They indicate that reducing expropriation risk (or improving other aspects of the institutions) would significantly increase income per capita.

3. Hypotheses

Our conceptual framework rests on three assumptions within the scope of post-independent political regimes, with a focus on the agriculture sector.

(1) Uzbekistan preserved Soviet system of state management of cotton and wheat production (Pomfret 2008), and by setting own prices the state indirectly taxed the individual farmers (Trevisani 2007). Child labor and forced adult labor in cotton fields was another specific attribute of post-Independent Uzbekistan during Karimov's government (Kandiyoti, 2008; Oxford Analytica, 2015). Thus, we hypothesize that:

H1: After independence, during Karimov's regime, Uzbekistan preserved extractive institutions in general.

(2) As of 2017, the government started to move away from state planning and control by exposing land tenure toward more market arrangement with less government intervention (Uzbekistan's Agricultural liberalization). The formal institutional changes are evident in the cotton and wheat sectors. Therefore, we hypothesize that:

H2: Uzbekistan's property rights (land) and agricultural institutions slowly started to evolve into inclusive institutions

(3) President Mirziyoyev's government reconsidered the liberalization policies in cotton and wheat amidst the 2020 pandemic. Consequently, we hypothesize that:

H3: The COVID-19 pandemic disrupted and backpedaled the trajectory towards the more inclusive institutions.

4. Methods and data

In our study, we use the theory of institutional changes in the post-soviet regimes of Uzbekistan. Our study explores the relationships between the slowly changing institutions in the country and human development. Institutions are characterized by the property right of agricultural land and the business environment, while human development and income equality are expressed in GDP per capita and the Gini coefficient.

Our study looks at institutional changes that took place in two political regimes in post-independent Uzbekistan across three periods. These are:

1. 1991- 2016: Islam Karimov's government
2. 2016- 2020: Shavkat Mirziyoyev's government

3. 2020: the year of the COVID-19 pandemic (Mirziyoyev's government)

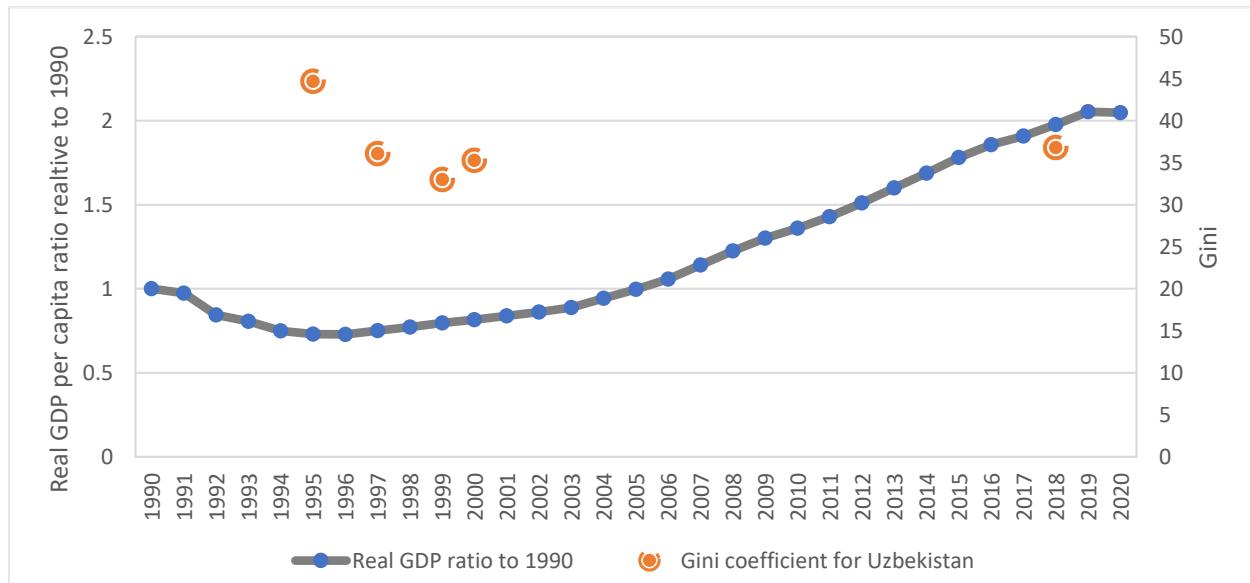
We study the correlation between the regime shifts and, thereby, institutions and the economic development features. The paper focuses on tenure security in agricultural land – as a key (independent) variable of our analysis. The study refers to policy documents as the source of data for scrutiny. Moreover, for the post-pandemic period evidence, we refer to the results of in-depth interviews with Uzbekistani peasants and farmers.

5. Results

Governance indicators

After an abrupt collapse of the Communist party rule in the Soviet Union in early 1990 along with other new independent countries, Uzbekistan started its transition into the market-based economy. However, the transition process was differently established in various new post-Soviet countries. Some of those states were more successful while others not so much (Bowles, 2004:4).

Figure 1: Divergence of Uzbekistan's real GDP per capita and Gini coefficient



Source: World Bank (2021)

Figure 1 presents the level of real gross domestic product (GDP) per capita relative to the year 1990 for Uzbekistan. In 1996, Uzbekistan's per capita income stood at around 30 percent below the initial level (1990). It was not until 2005 (15 years) the country retained its 1990 year level of per capita real income. Since 2005, Uzbekistan has been experiencing steady increase in average real income per capita.

Figure 2: Property right index for Uzbekistan



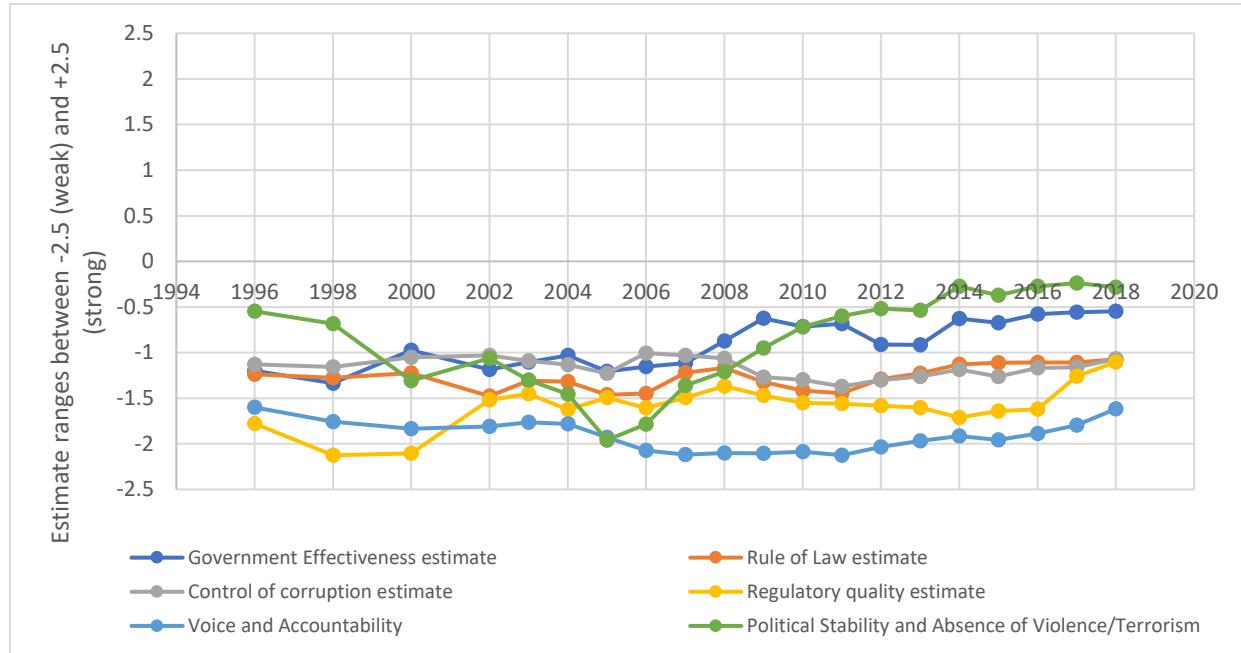
Source: TheGlobalEconomy.com (2021)

In the early years after the USSR's collapse income inequality level of Uzbekistan was also high however it decreased slightly (got better) until 2000 (Figure 1). With increased average income per capita after 2005 it seems inequality level also increased. We speculate it based on one observation in 2018 with 17-year gap (missing Gini indicator).

Figure 2 illustrates the property right index for Uzbekistan. The property rights index measures the degree to which a country's **laws protect private property** rights and the degree to which its **government enforces those laws**. Higher scores mean that property rights are better protected. Scores range from 0 to 100. The index also assesses the likelihood that private property will **be expropriated** and analyses the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to **enforce contracts** (Global Property Guide, 2021). The index was stagnant first decade of independence. However, between 2008 and 2016 the index got even worse. From year 2017, the indicator of protected property rights started to improve.

Figure 3 presents selected governance indicators for Uzbekistan. Table 1 provides definition of the indicators illustrated in Figure 3. Until 2005 Voice and Accountability (VO), though was declining, it rapidly deteriorated and stagnated at low rates until 2017.

Figure 3: Governance indicators for Uzbekistan



Source: Kaufmann et al. (2019)

Table 1: Governance indicators

Governance areas	Governance dimensions	Definition of the dimensions
(a) The process by which governments are selected, monitored, and replaced:	Voice and Accountability (VA)	Reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. [political institutions]
	Political Stability and Absence of Violence/Terrorism (PV)	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. [political institutions]
(b) The capacity of the government to effectively formulate and implement sound policies:	Government Effectiveness (GE)	Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. [centralization of government]
	Regulatory Quality (RQ)	Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. [private property protection]
(c) The respect of citizens and the state for the institutions that govern economic and social interactions among them:	Rule of Law (RL)	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
	Control of Corruption (CC)	Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

Source: Kaufmann et al. (2010)

Government effectiveness (GE) and Political Stability and Absence of Violence/Terrorism (PV) are the only indicators, which kept steadily increasing ever since in Uzbekistan. During the first decade of independence, the regulatory quality estimate (RQ) significantly degraded implying that the protection of property rights deteriorated continuously. Between 2000 and 2016, however this estimate relatively improved. The year 2017 marked another upward jump of RQ. The situation with rule of law (RL) and control over corruption (CC) did not experience dramatic downs and ups.

In general, all these estimates of the indicators are negative numbers, implying that the overall Uzbekistan's governance capacity is weak.

VA continuously decreased in years between 1996 and 2016. Citizens' participation possibility (i.e. political institutions' inclusivity did not get better during the years of Islam Karimov's regime. However, after 2016 there was an upward movement in the indicator. This, in turn Mirziyoyev's regime is associated with increased inclusivity of political institutions in general. PV dramatically decreased between 1996 and 2004. Afterwards, however, the very indicator has been continuously getting better.

GE or differently stating the centralization of the government (which is also a required ingredient in achieving inclusive institutional setting) steadily increased during both Karimov's and Mirziyoyev's regimes.

RQ – government's ability to formulate and protect private property rights degraded during the first decade of Uzbekistan's post-independence years. This period overlaps with the country's land fragmentation and consolidation policies. After 2003 this indicator did not change dramatically but rather showed stably weak performance level. Only after 2016 the indicator started its upward dynamics.

RL- it was continuously low for Uzbekistan until 2012. From 2013 onwards, the indicator started to improve. That is, already during Islam Karimov's regime this indicator started to improve, though very slowly. This upward course was taken up during Shavkat Mirziyoyev's government as well. However, Control over Corruption indicator has been continuously low during both regimes.

However, it is worth mentioning that during the post-independence years the county was not all the same. It is going through incremental changes both during Karimov's and Mirziyoyev's administration. Sometimes the changes are leading towards inefficient arrangement, other times it is getting better.

In the following subsections we consider agricultural land tenure system across years and different presidential administrations and derive parallels/correlations with institutional change trajectories from extractive to inclusive or the other way around.

From extractive to inclusive or the other way around

We claim that Karimov's administration inherited extractive institutional setting from the USSR and his regime continued doing most of the things in old way, in path dependent manner.

Land tenure systems define land use rights, control rights, and transfer rights. Table 2 provides a brief description of the types of property rights.

Table 2: Classification of property rights

Property rights	Definition
Use rights	Rights to use the land for grazing, growing subsistence crops, gathering minor forestry products, etc.
Control rights	Rights to make decisions about how the land should be used including deciding what crops should be planted, and to benefit financially from the sale of crops, etc.
Transfer rights	Right to sell or mortgage the land, to convey the land to others through intra-community reallocations, to transmit the land to heirs through inheritance, and to reallocate use and control rights.

Source: FAO (2020)

The major agricultural producers are peasants and individual farmers in Uzbekistan. Tables 3 and 4 present overview of institutional change process in land tenure arrangement since 1990. The tables divide the 30-years into three periods: period 1- years between 1992-1998 (Karimov); period 2- years between 1998-2016 (Karimov); period 3-years between 2017-2019 (Mirziyoyev) and period 4- since 2020 (post-pandemic). The tables 3 and 4 illustrate the dynamics of institutional path with three colours. Red colour represents change or stagnation of certain sub-dimension (institution) toward the extractive institutional setting. While green colour illustrates institution change into inclusive setting. Orange colour while also illustrates such change from extractive toward inclusive, it also implies that the change is only partial.

Table 3: Peasants. Overview of institutional change in tenure arrangements across years in Uzbekistan

Property right dimensions	Sub-dimensions	1992-1998 ^a	1998-2016 ^b	2017-2019 ^c	2020-present ^c
Use rights	Use rights	minimum 10 years - lifelong (Article 5)	Lifelong (Article 9)	30 to 50 years for horticulture and viticulture, and for 5 to 15 years for vegetable, melon and other agricultural activities.(Article 6)	Article 6
Control rights	How the land should be used	terminate if land is inefficiently used; Production is not established within a year after the farm is registered (Article 23)	Production is not established within a year after the farm is registered (Article 27)	- To abolish the land use agreements with the farmers, dehqan farms and landowners who have inefficiently used their land, have not fully planted their crops, and have not implemented agro-technical measures in a timely manner (PD599)	PD599

	Free to decide what crops to plant	Article 14	Article 12	If dehqan does not plant crops according to own direction (Article 10)	Article 10
	Free to sell at preferred price	Article 14	Article 12	Article 12	Article 12
	Free to choose the purchasing party for own produce	Article 14	Article 12	Article 12	Article 12
Transfer rights	Right to sell or mortgage the land	Article 5	Article 9	Article 7	Article 7
	to convey the land to others	Article 5	Article 9	Article 7	Article 7
	to transmit the land to heirs through inheritance	Article 5	Article 9	Article 3	Article 3
	Can be pledged	Article 5	The inherited right of lifelong possession of the land plot can be pledged to obtain a loan (Article 9)	...the farm has the right to pledge the property rights (ownership, use and lease) of the land plot, the private property of the members of the farm, the future harvest. (Article 14)	Article 14
	to reallocate use and control rights.	Article 5	Article 9	Land subleasing is permitted (Article 8)	Article 8

Note: ^a Law on dehqan farms 1992 available at: <https://lex.uz/docs/126617>; ^b Law on dehqan farms 1998 available at: <https://lex.uz/docs/31613>; ^c Law on dehqan farms 2020 available at: <https://regulation.gov.uz/ru/document/18996> and PD599 available at: <https://lex.uz/docs/3371644>

Source: Authors

Legend for cell colours:

	Inclusive setting		Partially inclusive setting		Extractive setting
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Table 4: Individual farmers. Overview of institutional change in tenure arrangements across years in Uzbekistan

Property right dimensions	Sub-dimensions	1992-1998 ^a	1998 ^b	2004 ^c	2017-2020 ^d	2020- present ^d
Use rights	Rights to use the land for grazing, growing subsistence crops, gathering minor forestry products, etc.	minimum 10 years - lifelong (Article 5)	minimum 10 years - maximum 50 years (Article 10)	minimum 30 years - maximum 50 years (Article 10)	minimum 30 years - maximum 50 years (Article 10, Law 2004)	minimum 30 years - maximum 50 years (Article 10, Law 2004)
Control rights	How the land should be used	terminate if land is inefficiently used; Production is not established within a year after the farm is registered (Article 23)	Violation of land legislation, including land use outside of its intended purpose, such as cultivating uncontracted crops is sufficient ground to terminate the farm (Article 32)	Violation of land legislation, including land use outside of its intended purpose, such as cultivating uncontracted crops is sufficient ground to terminate the farm (Article 32)	To abolish the land use agreements with the farmers, dehqan farms and landowners who have inefficiently used their land, have not fully planted their crops, and have not implemented agro-technical measures in a timely manner (PD 5199)	PD 5199
	Free to decide what crops to plant	Article 14	CabMin resolution # 438	Article 32	No state order, but crop allocation practice is still practiced	No state order, but crop allocation practice is still practiced
	Free to sell at preferred price	Article 14	CabMin resolution # 438	CabMin resolution # 438	PD4633 and PD4634	Even if the legal document PD4633 states free to choose the prices, in action (as a result of our interviews with farmers), we realized that clusters (in a path-dependent manner) still make farmers sign 3-5 contracts with different prices. The farmers do not know till the end which price will be their selling prices; In case of wheat: despite PD4634 states about steady liberalization of this sector during two years (2020 and 2021), our interviews revealed that farmers were forced to sell their wheat to the state for low prices (the state price was 1350 UZS/kg, while the market price was around 3000 UZS/kg). Moreover, the farmers were forced to sell 100% of their produce to the state in both 2020 and 2021, which was against the new decree.

	Free to choose the purchasing party for own produce	Article 14	CabMin resolution # 438	CabMin resolution # 438	PD4633 and PD4634	State attached certain farmer to a particular cluster, the farmers have no right to sign contract with any cotton processor
Transfer rights	Right to sell or mortgage the land	Article 5	Article 13	Article 13	Article 13	Article 13
	to convey the land to others	Article 5	Article 13	Article 13	Article 13	Article 13
	to transmit the land to heirs through inheritance	Article 5	the right to lease the land is inherited in accordance with the law for the term of the lease (Article 13)	the right to lease the land is inherited in accordance with the law for the term of the lease (Article 13)	the right to lease the land is inherited in accordance with the law for the term of the lease (Article 13)	Article 13
	Can be pledged	Article 5	The right to lease a plot of land can be pledged by the farm to obtain a loan (Article13)	The right to lease a plot of land can be pledged by the farm to obtain a loan (Article13)	The right to lease a plot of land can be pledged by the farm to obtain a loan (Article13)	Article13
	to reallocate use and control rights.	Article 5	Article 13	Article 13	Land subleasing is permitted (Law on Dehqan, 2020; Article 8)	Law on Dehqan, 2020; Article 8

Note: *For this particular case, we assume dehqan farm law also addressed individual farmers as well ; ^a Law on dehqan farms 1992; ^b Law on farms 1998 and CabMin resolution # 438 available at: <https://lex.uz/docs/-804341>; ^c Law on farms: 2004 year amendments CabMin resolution # 438 available at: <https://lex.uz/docs/-804341>; ^dPD5199 available at: <https://lex.uz/docs/3371644>; available at: PD4633 <https://lex.uz/docs/-4756994>; , PD4634 available at: <https://lex.uz/docs/4757009>

Source: Authors

Legend for cell colours:

	Inclusive setting		Partially inclusive setting		Extractive setting
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Table 5 summarizes the changes in farming land tenure arrangements across its sub dimensions and four periods, where all changes are taken with respect to period. Hence, this period is the status quo benchmark.

Table 5: Quantitative summary of institutional change in land tenure's sub-dimensions

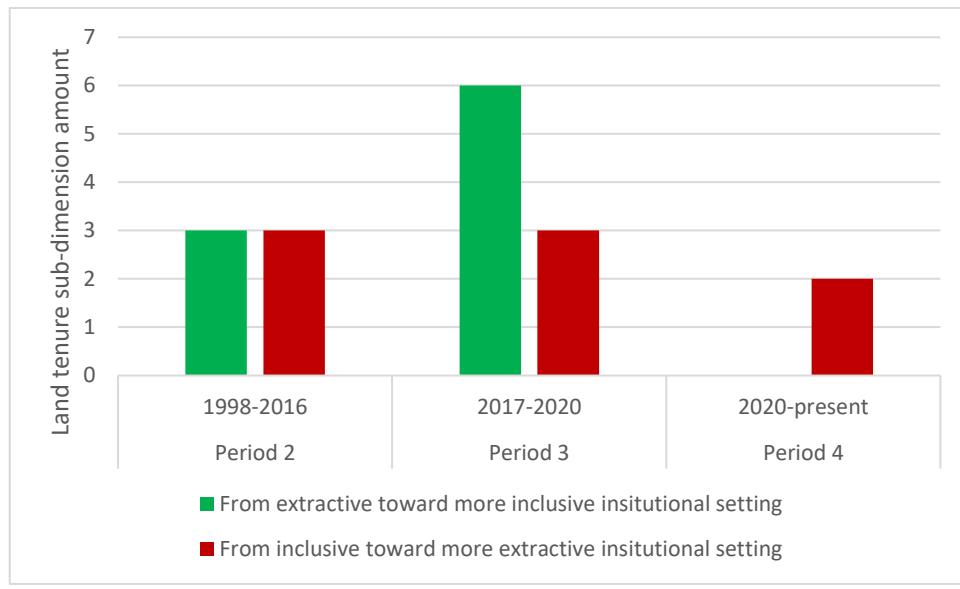
Classification of the institutional change/or stagnation	From → To	Period 1	Period 2	Period 3	Period 4
		1992-1997	1998-2016	2017-2020	2020-present
From extractive toward more inclusive institutional setting	Red → Orange	Status quo		1	1
	Orange → Green	Status quo		1	1
	Red → Green	Status quo		1	4
	No change relative to previous period	-		6	5
	No change relative to period 1	-		6	4
From inclusive toward more extractive institutional setting	Green → Orange	Status quo		0	2
	Green → Red	Status quo		3	1
	Orange → Red	Status quo		0	0
	No change relative to previous period	-		7	5
	No change relative to period 1	-		7	6

Source: Authors

Figure 4 while presents the part of the information from Table 5, it makes it easy to stat that indeed institutional change process in farming land tenure arrangements have been incremental. Because even during relatively stagnant years (1990s) the land tenure institution has been changing incrementally. That is certain sub-dimension was going through transformation either into more extractive setting or into more inclusive setting. It is worth mentioning that the number of changes toward and from extractive institutional arrangement were equal in Period 2. **This finding is not fully in line with our hypothesis H1.** Because even under Karimov's regime the land tenure arrangement was undergoing incremental change, there were more inclusive sub-dimensions of property rights in Period 2 than in Period 1. After the arrival of new president (Period 3) into the government, this ratio significantly changed and hence the change

process was more accelerated. In Period 3, number of changes toward inclusive setting was more than changes toward extractive setting. Hence, **we have reassuring evidence to support H2.**

Figure 4: Institutional change path in land tenure arrangements of Uzbekistan. Visualization.



Source: Authors

Though illegal according to Article 13 of the Law on "Individual Farms" from 1998, the informal land transactions as secondary land lease and sharecropping between dehqans and farmers are widely practiced throughout post-independence years in Uzbekistan (Mukhamedova & Pomfret, 2019). Unsupportive formal institutional framework along with Imperfect land and labor markets have been inducing farmers and peasants to opt for informal arrangements as sharecropping even if the sharecropping is less technically efficient than owner-cultivation or fixed rentals (Ahmed, et al., 2002).

Persistent informal sub-lease institutions could have led to the alterations in the formal institutions, which legalized the sub-leasing in the Dehgan Law from 2020 (during Mirziyoyev's presidency). These changes are in line with the steady improvements in the Property right and Voice and Accountability indicators in Figures 2 and 3 after 2016.

The global pandemic while exacerbated some existing issues in the rural sector of Uzbekistan, it also backpedaled the institutional change trajectory toward more extractive setting. Figure 4 illustrates that sub-dimension of property right experienced backward dynamics toward more extractive setting during Period 4. This is associated with the state's disregarding its own cotton and wheat sector liberalization policies. **This finding supports the hypothesis H3.**

The COVID-19 pandemic was an external shock, which served as a perturbation to the local stability domain of inclusive institutions. This shock caused backward shifts in the incrementally changing path.

More effort is needed in order to continue the country's pathway in transiting towards inclusive institutional arrangements. The extend of information we possess is limited and more time is needed in order to be able to assess if the institutional pathway indeed backtracked or not.

6. Conclusions

Scholars and policymakers have variously described Central Asia as a region afflicted by Orientalism, Islam, or unreformed communists and stagnant Soviet institutions. In the late 1990s, Uzbekistan's regimes transitioned into authoritarianism, clan-based (elite) networks dominated political life (Collins, 2002).

In this paper, we have focused on farmland tenure arrangement and scrutinized it through the lenses of institutional change and resilience.

Overall, the governance indicators of Uzbekistan are weak and hence categorize Uzbekistan as a country with extractive institutions. However, these indicators have been showing various paths of transition during the presidencies of Karimov and Mirziyoyev. It was not all the time downward sloping during one and upward sloping during other president's period. Instead, these numbers kept incrementally improving already during Karimov and continued by Mirziyoyev's government. At the same time, there were certain governance indicators (e.g. Voice and Accountability) which only got better only after Mirziyoyev's presidency started. Moreover there are still certain crucial governance indicators such as control over corruption continuously showing weak governance indicators under both Karimov's and Mirziyoyev's presidency.

After independence during Karimov's government Uzbekistan preserved extractive institutions in general. However, the situation was not fully stagnant. There were incremental changes in farmland tenure arrangements. For example in the period between years 1991-1997, 5 out of 10 sub-dimensions of peasant land tenure carried extractive characteristic (red), four sub-dimensions resembled inclusive setting (green). Until 2016 these numbers further changed and there were three extractive and inclusive and two partially inclusive sub-dimensions of land tenure arrangement. The process of change in farmland tenure arrangements turned to be faster with the arrival of new president Mirziyoyev as more sub-dimensions of property right were resembling more inclusive arrangements. Informal arrangement, such as sub-leasing and sharecropping, in farmland tenure were ubiquitous during Karimov's regime. This was the response to the ineffective official institutional settings. Some of those persistent land arrangements was legalized with the arrival of new president. We can consider sub-lease legislation as one of such arrangement. The COVID-19 pandemic disrupted and backpedaled the trajectory towards the more

inclusive institutions. This, in turn, raises questions about resilience of institutional change path of the country under new regime

Our analysis does not address many questions. We lack reliable estimates of the effect of institutions on income across Uzbekistan's political regimes. However, we can see some correlations between the changing institutions. A more detailed analysis of the effect of more fundamental institutions on property rights and expropriation risk is an important area for future study. More needs to be studied about informal institutions. For example, the informal institutions' role in formal institution change process remains unstudied. We also do not point out concrete steps that would lead to an improvement in institutions.

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