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Colonization and changing social structure: Evidence from Kazakhstan

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ABSTRACT

We study how Russian colonization of the Kazakh steppes in the late 19th century influenced the evolution of traditional institutions of Kazakhs. Using a rich dataset constructed from Russian colonial expedition materials, we find that during the transition from nomadic pastoralism to a semi-sedentary pastoralist-agricultural system, Kazakhs' traditional communes shrank, property rights on land became more individualized, and households became less likely to pool labor for farming. We argue that two main forces behind this evolution were increasing land pressure and technological change. The speed and the magnitude of these adjustments were much larger than usually assumed in most of development economics literature on traditional institutions.

1. Introduction

Extensive literature in economics and political science documents the persistence of cultural and social characteristics of societies (Putnam, 1993; Fernandez and Fogli, 2006; Guiso et al., 2006; Alesina et al., 2013, among others; see Alesina and Giuliano, 2015, for a survey). In line with this view, when examining empirically the impact of policies or changes in resource endowments, development economists usually tend to assume that culture and traditional institutions (such as co-residence patterns, inheritance practices, marriage arrangements, etc.) change very slowly and that considering them as fixed is not problematic. Several recent contributions (Foster and Rosenzweig, 2002; Bardhan et al., 2014; Hamoudi and Thomas, 2014; Guirkinger and Platteau, 2015) challenge this premise by showing how household composition and pre-mortem inheritance practices evolve in response to the socio-economic environment and policies. Nevertheless, the evolution of culture and traditional institutions remains understudied in economics, mostly because of lack of data during the important episodes of change. Ideally, one needs panel data including both the measures of traditional institutions and behavior (preferably, at micro-level), with sufficiently large time frame. Moreover, such data should come from episodes or periods of relatively large-scale changes in the economic environment of the society under study.

This paper examines one such important episode: the change in

traditional institutions of Kazakhs in response to Russian peasant colonization. In particular, we analyze the evolution of traditional rules governing the allocation of land and labor within Kazakh extended families in the late 19th–early 20th century, using data from two waves of Russian colonial statistical expeditions in Central Asia. During this period, the massive Russian peasant in-migration forced Kazakh nomadic pastoralists to modify their production systems and to gradually become more sedentary. After describing and quantifying the adaptation of traditional institutions to the new conditions, we discuss the economic mechanisms likely to explain the observed patterns of change.

More specifically, using a proxy for the density of Russian settlers and the panel structure of the data, we show that as colonization progressed, property rights on land within Kazakh families and clans became increasingly individualized. The size of the group of families exploiting jointly summer pastures (the so-called communes) decreased. These groups federated families from the same clan, and we find that clan-based identity itself was modified over the 10-12-year period between the two waves of data. Furthermore, joint production within the extended families gave way to more individual forms of land and labor use, centered on nuclear households. Simultaneously, labor markets developed: richer households increased their reliance on hired workers from poorer households, both from their own extended family and outside it. The speed of these changes is striking. For example, over the 10-12-year period, the number of communes increased by more

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than 40% in some provinces and the number of clans enumerated increased by 40–90%. Simultaneously, the collective exploitation of hay parcels decreased by up to 27% points, replaced by a distribution of parcels to individual households. Furthermore, the share of extended families that delegated crop cultivation to individual households (as opposed to joint cultivation) increased by up to 19 percentage points while the share of households that hired workers for crop cultivation increased by 10 percentage points.

Turning to potential explanations for the growing individualization of property rights and production, we argue that two key drivers were population pressure and technological change. The abolition of serfdom in Russia in 1861 and the consequent migration of landless peasants from the European part of Russia into Central Asia (later actively encouraged by the Czarist administration) led to numerous Russian peasant settlements in Northern Kazakhstan, in particular on the traditional wintertime pastures and transhumance routes of Kazakh nomadic pastoralists, which sharply increased the population pressure on land in Kazakhstan. In parallel, the new migrants brought with them agricultural techniques (e.g. techniques of haymaking and rain-fed agriculture, iron ploughs and harrows, etc.) which diffused among the Kazakhs, in particular, as the latter started to combine pastoralism with some agriculture. Both the rising population pressure and the intensification of technology in agriculture made privateproperty regime on land more attractive, mainly because under such regime the private and social returns of exploitation of land resources were better aligned. While we do not formally establish a causal link between these factors and the processes of individualization, we provide evidence indicating that individualization occurred earlier in areas where land pressure was stronger and changes in the production system deeper (i.e. in the vicinity of Russian settlements).

Regarding the simultaneous development of labor markets, a likely cause was the exclusion of certain households from the distribution of collective resources during the individualization process, thus confirming the predictions of models of privatization of common-property resources (Weitzman, 1974; Baland and Francois 2005; Baland and Bjorvatn, 2013). These households then had to turn to wage labor. In addition, we argue that formal labor contracts were likely gradually replacing traditional systems of labor exchange (akin to patron-client relationships) embedded within extended families (Platteau, 1995).

Understanding change in culture and traditional institutions – in particular, the speed of change and the forces behind it – is crucial for development policy-making. The few recent contributions that focus on change in institutions analyze how household composition (and, in some cases, pre-mortem inheritance practices) evolve in response to technological change (Foster and Rosenzweig, 2002), rising land pressure (Guirkinger and Platteau, 2015), land policies (Bardhan et al., 2014), or programs of public transfers (Hamoudi and Thomas, 2014).¹ These studies suggest that ignoring impacts of policy on household divisions may lead to substantial biases in the evaluation of policies.

Beside the aforementioned literature, we also contribute to the current debate about the role that families, kinship networks, and clans play in shaping individual incentives and determining aggregate economic outcomes and development trajectories. Researchers have documented the importance of these institutions for migration decisions, occupational choice, credit transactions, provision of public goods, transmission of knowledge and technology adoption, and

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numerous other aspects of economic life (see, for instance, Wegge, 1998; LaFerrara, 2003; Leunig et al., 2011; Gupta, 2014; Greif and Tabellini, 2015; De la Croix et al., 2016; Guirkinger and Aldashev, 2016).² The importance of these traditional institutions have been shown in highly diverse contexts, spanning all areas of the developing world (for India, see Platteau, 1995; Munshi and Rosenzweig, 2006, and Gupta, 2014; for China, see Freedman 1965, and Greif and Tabellini, 2015; for Mexico, see Munshi, 2003; for Sub-Saharan Africa, see Platteau, 2000, and LaFerrara, 2003, etc.).

Our study also complements the work of economic historians on Czarist Russia. Most of the studies (for example, Nafziger, 2010; Dennison, 2011: Chernina et al., 2014: Markevich and Zhuravskava, 2015) focus on the institutional changes in the early 20th-century Russia. Despite the fact that Russia was one of the largest colonial empires, scarce attention has been paid to the economic history of Russian colonization, in particular, to the consequences of Russian colonization for the development trajectories of the ex-colonies. The few exceptions are Natkhov (2015) which studies the effect of Russian settlers in the North Caucasus in the 19th century on the long-term development outcomes, as well as our earlier contributions (Aldashev and Guirkinger, 2012, and Guirkinger and Aldashev, 2016). Focusing on the same period and context and relying partly on the same data sources, Aldashev and Guirkinger (2012) analyzes the effect of Russian colonization on the gender bias among Kazakhs. Guirkinger and Aldashev (2016) studies the effect of clan institutions on technology adoption and the organization of production. The current paper, instead, studies the effect of Russian colonial settlement on the Kazakhs' clans and extended families themselves.

The remainder of the paper is structured as follows. Section 2 introduces the historical background and the data. Section 3 describes the changes in Kazakh traditional institutions occurring during Russian colonization. In Section 4 we turn to the economic mechanisms that help explaining the growing individualization of land within families and the development of labor markets. Section 5 concludes.

2. Historical background and data

2.1. Kazakh nomadic-pastoralist economy

Nomadic pastoralism became the dominant production system in Kazakhstan around 1000 BCE (following the worsening of the climatic conditions for agriculture) and remained so until the middle of the 19th century, when Russian in-migration into the Kazakh steppes took off. Horses, sheep, and cattle represented the main stock of wealth, as well as the key production inputs and the principal sources of food. The nomadic pastoralism consists of seasonal transhumance, i.e. of changing physical location of households and their livestock between two and four times during the calendar year. This transhumance between summer and winter pastures (with relatively shorter stays on intermediate autumn and spring stops) is necessary because under this system livestock subsists throughout the year on natural grass cover as fodder; thus, remaining permanently on the same place would rapidly become unsustainable.³

This carefully balanced system developed through centuries of adaptation to the geography and the climate of the area. Summer pastures provided abundant fodder during the warmer months but became inhabitable in winter. Distances between winter and summer pastures were large, often exceeding 200 km (Matskevich 1929; Ferret 2014). The scarcity of good winter pastures (i.e. areas close to rivers, lakes, and hills) implied the need to preserve the fodder of the winter pasture for the next year. This need, coupled with the relatively flat

¹ Outside economics, several well-known qualitative studies by social historians and anthropologists argue that culture and traditional institutions often tend to evolve in response to changes in the socio-economic environment (see, for instance, Goody, 1983; Secombe, 1992, and Todd, 2011). Within economics, there also exist a small but growing theoretical literature studying the dynamics of the interaction between formal/ modern and informal/traditional institutions in developing-country contexts (see Kranton (1996), Banerjee and Newman (1998), McLaren and Newman (2002) and Aldashev et al. (2012)).

 $^{^2}$ Cox and Fafchamps (2007), LaFerrara (2011), and Munshi (2014) provide excellent surveys of this literature.

 $^{^{3}}$ Ferret (2014) provides a detailed classification of the main forms of nomadic pastoralism in Central Asia at the end of the 19th century.

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