Who has to leave and why? Displacement in Kyrgyzstan: Evidence from a New Micro-Level Dataset

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Abstract: Incidences of mass displacement constitute a major obstacle to economic and social prosperity in many developing countries. While significant progress in understanding the micro-level foundations of violence is being made, quantitative evidence on individual and group interactions in displacement environments is still relatively scarce. In this paper, we use unique household and individual survey data from Kyrgyzstan to study the causes and effects of the country's 2010 episodes of ethnic violence and forced displacement. The detailed information available on displacement at household and individual level allow for an in-depth analysis of the dynamics underlying the violence. Focusing on conflict-related displacement, our results confirm horizontal inequalities between ethnic Kyrgyz and Uzbeks to be among the main drivers of the riots, while hardly any effects are found for vertical inequalities or the presence of ethnically diverse populations per se. At the individual level, the decision to flee from conflict-prone areas is shown to depend on various demographic, social and economic factors.

Keywords: displacement, horizontal inequalities, vertical inequalities, victimization, Central Asia

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1 Introduction

In June 2010, a series of violent confrontations broke out in southern Kyrgyzstan. The violence spread rapidly, and took an ethnic character as Uzbeks, who are today the second largest group in Kyrgyzstan, clashed with ethnic Kyrgyz. Within a few days, from June 10-14, there were 400,000 people displaced and over 300 dead [Solvang and Neistat, 2010]. Academics as well as the media have referred to the clashes between Kyrgyz and Uzbeks as not only inter-ethnic, but rather economic. For instance, Bond and Koch [2010] state: *Although the fighting was primarily between Kyrgyz and Uzbeks, the basis for much of the tension between the two groups is not ethnicity per se [...], but rather economic and class differences.*

Anecdotal evidence suggests that the clashes have been caused by long simmering economic, political and social tensions between the two ethnic groups. However, profound empirical evidence on the drivers and effects of the violence is hardly available. In this paper, we aim to answer two questions: First, which communities where particularly prone to the occurrence of violence? Here, we particularly focus on the role of economic and social inequalities. Second, who decided or was forced to flee the community in those areas affected by the violence? We combine the household survey data with census data from Kyrgyzstan 2009.

The economic disparity between Kyrgyz and Uzbeks implies that the violence is considered to be the result of horizontal Inequalities [Steiner and Esenaliev, 2011]. Horizontal Inequalities (HIs) are inequalities between groups of people that share a common identity. Such inequalities between groups can have economic, social, political and cultural dimensions, each of which contains a number of elements. It is argued that HIs increase grievances among the relatively deprived group and thus facilitate violent conflict [Murshed and Gates, 2005]. It can also be the opposite way that relatively privileged groups attack the unprivileged, fearing that they may ask for political power and resources [Stewart, 2008]. Quantitative evidence has been produced across and within countries and concerns both socio-economic and political HIs, but data limitations constrain the range of within-country studies [Langer, 2005, Stewart, 2002]. However, cross-country studies can only tell part of the story, as they miss out on regional, household and individual conditions by construction [Nillesen and Verwimp, 2010].

Stewart [2002] notes that group's relative performance in economic, social

and political dimensions is an important source of individual welfare and can cause serious instability. He illustrates this by nine case studies, in which horizontal inequalities have led to a range of political disturbances.

Østby [2008] is the first to empirically test the concept of HIs in the conflict literature. Her analysis across 55 countries for 1986-2003 reveals a significant rise in the probability of conflict in countries with severe economic and social HIs. In her models, she defines groups alternatively along ethnic, religious and geographic lines, and finds a significant relation between HIs and the onset of violent conflict for each dimension. She measures economic HIs by average household assets and social HIs by average years of education. The effect of HIs is quite high: the probability of conflict increases threefold when comparing the expected conflict onset when all variables have average values, compared to a situation where the extent of horizontal inequality of assets among ethnic groups is at the 95th percentile.

Country-level studies confirm a positive relationship between the level of HIs and the incidence of conflict: Mancini [2005] uses district-level data to examine the connection between HIs and the incidence of conflict in Indonesia. After controlling for a number of intervening factors, including economic development, ethnic diversity and population size, he finds a positive line between the evolution of horizontal inequalities over time and the occurrence of inter-ethnic violence. These results suggest that violent conflict is more likely to occur in areas with relatively low levels of economic development and greater religious polarization. In contrast, standard measures of (vertical) income inequality and other purely demographic indicators of ethnic diversity show to have no significant impact on the likelihood of communal violence. Østby et al. [2011] focus on the violence potential of resource scarcity and population as well as polarization and HIs in the grievance framework in Indonesia. Demographic pressure and inequality seem to have little effect in isolation. However, in provinces where population growth is high, greater levels of inequality between religious groups appear to increase the violence risk.

The extreme scarcity of micro survey data from contemporary conflict and post-conflict societies has limited research progress on the questions of the causes and victims of conflict [Blattman and Miguel, 2000]. One exceptional aspect of this study is the availability of high quality nationally representative household data from Kyrgyzstan containing detailed information on conflict-related displacement, in addition to the more standard socioeconomic questions. The main empirical results focus on the community and individual-level analysis of

displacement made possible by this unique dataset.

In theory, *displacement in the context of civil conflict is a consequence of the presence or the threat of a violent attack, and not a voluntary migration decision in a narrow sense* [Czaika and Kis-Katos, 2009]. While many individuals or whole households flee from the conflict area to save their lives, others do not leave their homes to seek refuge. There are at least two explanations for this phenomenon. First, violence is not randomly targeted, that is some individuals or groups within the population are more prone to attacks by armed groups, which make these people more disposed to flee than others. Second, when deciding upon staying or leaving, individuals or households do not only take into account security factors, but socio-economic determinants, too. Whether targeted individuals or households prefer to stay at home also depends on the degree of risk aversion [Czaika and Kis-Katos, 2009].

Ibáñez and Vélez [2008] find that risk variables, like landownership and the insertion of the family in the community, are push factors that drive the displacement decision. Further, families with access to basic services are less likely to leave their home. Their study provides evidence that illegal armed groups may attack households with particular characteristics such as landowners or community leaders.

Czaika and Kis-Katos [2009] identify the determinants of displacement behavior based on various push and pull factors at the village level. After controlling for conflict variables, socio-economic factors remain significant and robust determinants for explaining internal displacement. As expected, they find a negative effect of conflict on net population change. Social networks also play an important role in explaining the size of a population outflow and the duration of stay [Carrington et al., 1996]. According to the theoretical migration approach, migration costs decrease with the number of migrants already settled in the destination country. Established networks of previous (economic) migrants can strongly influence the displacement decision by providing housing, support in finding employment and other contacts [McKenzie and Rapoport, 2007, Woodruff and Zenteno, 2007] [1].

The paper's objective is to increase our understanding of the micro-level dynamics of violent conflict in Kyrgyzstan in June 2010 by studying the reasons of forceful displacement. Our contribution to the conflict literature is thereby

[1] There is a large literature on the effects of displacement, particularly from Colombia, e.g. Ibáñez and Moya [2006] show that forced displacement leads to a significant asset loss and has large short- and long-term consequences.

twofold: firstly, the study analyzes the causes of displacement on the community level with a focus on (horizontal and vertical) inequalities between ethnic groups. Secondly, the analysis also adds insights to the socio-economic characteristics of the victims of forceful displacement. Our findings suggest that social and economic HIs between ethnic Kyrgyz and Uzbeks have been adequate predictors of displacement. We do not find any effects for vertical inequalities or the presence of ethnic polarization.

At the individual level, we show that the decision to flee due to the riots depends on various demographic, social and economic factors: Particular females (with young children) are found likely to flee from conflict-affected communities, while members of better off households tend to stay with their property. We find that displacement is a non-random event. This is true for any conflict setting. In conflict environments, young adults are the most probable targets for threat, violence, and forced recruitment, which increases the likelihood for displacement of this subgroup of the population [Todaro and Smith, 2003]. Thus, displacement is both driven by non-random targeting of violence and economic considerations. In many cases, the fear of violence triggers displacement by reinforcing the fundamental push factors that drive the rural-urban migration decision. The relative importance of violence and economic factors is a priori unknown and has to be addressed by empirical analysis [Czaika and Kis-Katos, 2009].

Only few studies address the profiles of victims. For instance, Bundervoet [2009] analyses the victim profiles from the 1990s massacres in Burundi and finds that livestock and human capital increase the propensity to be killed. Bellows and Miguel [2009] find that respondents that live with a community leader are more likely to experience violence during the war (in the Sierra Leone context). De Walque [2006] shows that Khmer Rouge particularly killed educated in urban areas. Using the characteristics of the survey respondent as a proxy for the socio-economic status of the family dead, De Walque and Verwimp [2009] find that individuals with an urban or more educated background are more likely to die in the Rwandan genocide. A common result from the empirical studies of the above mentioned authors is that victimization is not a random event: victims are deliberately targeted, be it for their ethnicity, wealth, gender, religion or status [De Walque and Verwimp, 2009].

In our study, we aim to combine the above mentioned strands of literature on horizontal inequalities, displacement and victimization to draw a comprehensive picture of the displacement in June 2010 in southern Kyrgyzstan.

The paper is organized as follows: Section 2 provides background on the ethnic conflict in Kyrgyzstan before summarizing the literature on horizontal inequalities, displacement and victimization in section 3. Sections 4 and 5 describe our data and the implemented research design. In section 6 and 7, we discuss the empirical strategy and our empirical results. Section 8 shows the sensitivity analysis and section 9 concludes.

2 Background on the Ethnic Conflict in Kyrgyzstan 2010

The Ferghana Valley, on the cross-road of Kyrgyzstan, Uzbekistan and Tajikistan is a cultural and linguistic melting pot. While ethnic Kyrgyz constitute a majority, the provinces of Osh and Djalal-Abad in the Ferghana valley have a significant Uzbek minority. In some cities and districts, ethnic Uzbeks even form the major ethnic group, such as in the cities of Osh (49%), Uzgen (90%) and in Aravan district (59%) [Khaug, 2005, Solvang and Neistat, 2010].

Historically, Osh, Jalalabad and Uzgen were inhabited by sedentary Uzbek traders and farmers, while the nomadic Kyrgyz moved between winter camps and summer pastures. Yet border delimitation in the 1920s and forced collectivization in the 1930s disrupted centuries-old economic and social structures, and ethnic Kyrgyz increasingly started to settle in the valley, which put pressure on land and water resources in areas already inhabited by ethnic Uzbeks. Grievances over land and water distribution increasingly took on an ethnic dimension after the 1990s events [Fumagalli, 2007a,b, Bond and Koch, 2010, Melvin, 2011].

After the collapse of the Soviet Union, the Uzbeks are said to have made the transition to business men faster than the Kyrgyz, which apparently makes them wealthier in the southern part of Kyrgyzstan [Melvin, 2011]. This is also the common perception among the population and the media in Kyrgyzstan and the Central Asian region. Uzbeks are reported to play a major role in the business and economic world [2]. However, they feel sidelined from political decision-making [3].

Another reason for discontent among Uzbeks in Kyrgyzstan is the issue of

[2] See http://iwpr.net/print/report-news/addressing-roots-conflict-kyrgyzstan (last accessed on February, 5 2012).

[3] See http://www.guardian.co.uk/world/2010/jun/20/kyrgyzstan-uzbekistan-ethnic-civil-war(last accessed on February, 5 2012).

the status of their mother language. Contrary to Kyrgyz and Russian, which are both recognized as official languages, Uzbek has no official language status. During the presidencies of Akiyev and Bakiyev, the use and visibility of the Uzbek language declined in the public [Matveeva, 2010, Omuralieva, 2008]. In December 2010, the governor of Osh instructed local government institutions to conduct all business in Kyrgyz as opposed to Russian which is widely used as official language between different ethnic groups. This action has created grievance among the Uzbek community.

There have been two episodes of major violent conflict in Kyrgyzstan. The first episode dates back to June 1990 when mass riots broke out in southern Kyrgyzstan. Causes of the violent conflict seem to have been a struggle over power structures, increased social differentiation in urban and rural areas, high unemployment rates and disputes over land distribution [Tishkov, 1995, Solvang and Neistat, 2010]. Uzbeks complained about their underrepresentation in government structures and public services, while the Kyrgyz focused on their economic deprivation and land shortages. Since the 1990 episode of violence, the communities with Uzbeks have been considered potential conflict areas in Kyrgyzstan [Fumagalli, 2007b]. The second episode of violence refers to the inter-ethnic clashes between the Uzbek and Kyrgyz population in June 2010 in the south of Kyrgyzstan. Around 300 people were killed (the majority of them Uzbeks), 2500 people injured and approximately 100,000 fled to neighboring Uzbekistan [UN High Commissioner for Refugees, 2011, UN Office for the Coordination of Humanitarian Affairs, 2010]. Approximately, 2800 buildings were damaged or totally destroyed in Osh, Jalal-Abad and Bazar-Kurgan in the southern part [UN Institute for Training and Research, 2010]. Furthermore, property was largely destroyed, but accurate estimates of destroyed property is not available [Bond and Koch, 2010, Melvin, 2011].

While the conflict might have been triggered by a series of coordinated attacks carried out by separate armed groups, the underlying dynamics of these events are not entirely clear [Steiner and Esenaliev, 2011]. President Bakiyev concentrated power within his family and secured contracts for friends and relatives. His government also increasingly persecuted influential opposition leaders and journalists [Solvang and Neistat, 2010]. Hence, most people in Kyrgyzstan were dissatisfied with high corruption, increased energy tariffs, media surveillance and nepotism in spring 2010. The financial crisis in 2009 and early 2010 created further pressure on the economy. Labor migrant remittances started to decline as the Russian economy slowed down. Utility prices were hiked at the

beginning of 2010 [Melvin, 2011].

In April 2010, violence erupted in the cities of Talas and in the capital city of Bishkek when police forces dispersed the protest against the government. 85 people were killed and hundreds wounded [Solvang and Neistat, 2010]. An interim government was established after Bakiyev fled to Jalalabad, thereby shifting the center of the tension to the southern part of the country. In the months following the April violence, the overall situation in Kyrgyzstan stayed tense. The plans for a new constitution and a constitutional referendum encouraged ethnic Uzbeks to formulate their political grievances. They asked for more political and social participation, including proportional representation for ethnic Uzbeks at all levels of the governmental administration and recognition of the Uzbek language. However, the draft constitution published in May 2010 did not reflect these demands. The torching of Bakiyev's houses increased tensions and when several thousand Kyrgyz gathered in Jalalabad, they clashed with ethnic Uzbeks [Solvang and Neistat, 2010].

Violence further erupted in southern Kyrgyzstan when large groups of ethnic Kyrgyz and Uzbek clashed on June, 10-14. Information and rumors about the violence quickly spread, first to surrounding villages and then to different provinces increasing violent attacks also in Jalalabad [Solvang and Neistat, 2010]. From eyewitnesses, there is clear evidence that Uzbeks' property and places of residence were disproportionately attacked and damaged and disproportionately many Uzbeks were arrested [Melvin, 2011, Solvang and Neistat, 2010].

3 Data and Research Design

3.1 Data

For our empirical analysis we use the cross-section 2010 Life in Kyrgyzstan Survey (LIK) and the Kyrgyz Census data from 2009. The LIK sample frame uses a stratified two-stage random sampling approach based on the 2009 Census of Kyrgyzstan. The strata were formed by the rural and urban areas of the seven oblasts, and the urban areas of the two biggest cities Bishkek and Osh, amounting to a maximum of 16 strata in total. The survey is representative on the national level and in the north and south of the country. It was prepared by the German Institute for Economic Research (DIW Berlin) in cooperation with local partners in Bishkek. The field work was carried out from October to

December 2010, hence starting about three months after the conflict. The LIK panel survey follows households and individuals and addresses a wide range of issues, for example, subjective well-being, security and violence, labor market activities, human capital, social networks, migration, and income generation. Every adult household member above age 18 was asked to fill out the individual questionnaire. We have information on 8,160 individuals (over 18 years) and 3,000 households in 120 communities.

In addition, we use Kyrgyz census data from 2009. The census was conducted by the National Statistical Committee of the Kyrgyz Republic. It contains detailed data on the number of population, residence, sex, age, nationality, language, marital status, income, migration and housing conditions. Only very few data is available on the rayon (county) level. From the census data, we derive indicators on the economically active and the employed part of the population (on rayon level). To construct measures of horizontal inequalities, we use census information on educational attainments by ethnicity and rayon. Overall, we have LIK and census data on 50 rayons that are both listed in the census and the LIK data [4].

We are mainly interested in families who report to have been displaced due to the riots in June 2010. A potential bias in our sample may arise from the fact that we do not trace those displaced people who have not returned (yet). However, the survey does provide information why a selected household did not participate in the interview (Table 2). The most common reasons for the replacement of household are the following: *refused to participate*, *household members were absent*, *housing was vacant* and *housing not found* [5]. In Issyk-kul, Naryn and Osh-City, most households did not participate because of absent household members, while the major other reason in all other oblasts was refusal of participation. Vacant housing was high in Issyk-kul (30%), Naryn (25%) and rural Osh (31%) indicating that rather rural households had left or where absent. As numbers are high not only in conflict-affected areas, such as Osh and Jalalabad oblast, we believe that our displacement data is not substantially biased by the fact that some IDPs or refugees might not have returned before the interviews. The potential threat that vacant or destroyed houses might bias our estimates

[4] We were not provided with the individual or household-level data but only with the averages of different outcome variables per oblast or rayon (in the case of education).

[5] The answer option *housing no longer exists* could also be a potential threat to our sample. However, there are only six families reporting *housing no longer exists* and four of them live in Issyk-kul where almost no riots took place. Hence, we suppose that there is no relation between non-existing housing and the potential non-returnees.

is rejected by our data, too. There are high rates of vacant houses in Issyk-kul, Naryn and Chui. Hence, high rates are reported in non-conflict regions, too. Displacement was of a short-term nature, from 1-6 weeks on average, so most displaced had returned at the time of the survey. International organizations report that the majority of displaced returned to their homes shortly after they had left their houses in June 2010 (Table 1). Hence, we are confident, that we do not miss households which have not returned to their initial place of living by the time the survey was conducted.

Table 3 shows differences in replacement reasons between northern and southern and conflict and non conflict-affected oblasts. We find that households in the south are more likely to participate in the survey. When examining differences between conflict and non conflict-affected oblasts, we find that there are no significant differences for the two reasons *housing was vacant* and *family members absent*. Less people in conflict-affected areas did not participate due to *refusal* or *housing not found*. For instance, while 21.3 percent refused to participate in our survey in non-conflict affected oblasts, only 10.6 percent refused in conflict-affected provinces. These descriptives support the view that our displacement data is not biased.

3.2 Research Design

3.3 Dependent Variables

Brueck et al. [2010] introduce a generic household module for the micro-level study of violent conflict that was partly inserted into the Life in Kyrgyzstan Survey. These questions enable us to address specific violence-related issues on the disaggregated micro-level. Conflict variables can be constructed on the individual, household and community level: on the individual level, we have information on the perceived level of security in the neighborhood, experienced violence and the intensity of the violence. The questions are asked in an indirect way such as "Do you know someone who experienced...?". It is therefore not possible to measure direct conflict expeeriences, except for the displacement decision of an individual as a response to the June riots. For other questions that directly ask for security or violence experience, we cannot distinguish between violence that took place due to the June riots and violence that occurred regardless of the ethnic tension. We aggregate the individual displacement decisions at the household level (at least one household member was displaced)

and then at the community level (the share of displaced individuals/households in the community).

3.4 Independent Variables

3.4.1 Horizontal Inequalities

The data for generating the variables of horizontal and vertical inequality are taken from the census. These data were collected before the start of the ethnic riots in June 2010, and we use the census information to construct measures of pre-conflict inequality at the rayon/county level. Our first indicator of horizontal inequalities, social horizontal inequality, was generated on the basis of census information on individual educational attainments by ethnic group and rayon (county). We measure educational attainment through the share of Kyrgyz or Uzbeks, respectively, with at least full secondary education. Following Østby [2008], we use the following formula for social horizontal inequalities between the two largest groups in Kyrgyzstan, Kyrgyz and Uzbeks (thereafter two-group Horizontal Inequality Index (2HI)):

$$2HI = 1 - exp(-|ln(A_1/A_2)|) \tag{1}$$

where $A1$ refers to the share of group 1 (the largest ethnic group) that has at least full secondary education and $A2$ is the corresponding share of group 2 that has at least full secondary education. For our sample, this provides us with a continuous variable of social horizontal inequality ranging from 0 (the lowest level of inequality) to 0.43. In a second step, we also construct a measure of social $2HI$ from the LIK dataset for comparison purposes. The variable is constructed in the exact same way and ranges from 0 to 0.59. Our first hypothesis is a positive relationship between the level of social 2-group horizontal inequality between Uzbeks and Kyrgyz in a community and the risk of displacement in a community (as a proxy for violent conflict) The $2HI$ measure described above can be criticized for leaving out impor- tant information about smaller ethnic groups in Kyrgyzstan such as Russians, Dungans, Uigurs and Tatars. Hence, we also construct measures for social horizontal inequalities based on information about all ethnic groups in Kyrgyzstan, to investigate whether they perform better as predictors of displacement than the $2HI$ measures. A further

advantage of this measure is that it also takes into account group sizes. For this purpose, we use the group-based coefficient of variance (GCOV) (in the following multi-group horizontal inequality) following Tadjoeddin et al. [2003]:

$$GCOV = \frac{1}{\bar{y}}(\sum_{r=1}^{R} p_r(y_r - \bar{y})^2)^{1/2} \tag{2}$$

where R is the number of ethnic groups, $\bar{y}$ is the overall sample mean of variable y, p_r is the population share of group r, and y_r is the average of variable y for group r. The higher the value of multi-group horizontal inequality, the sharper the inequality between groups. We also generate a rayon-level measure for vertical inequality, proxied by a Gini coefficient of inequalities in terms of educational level.

The GCOV and the Gini coefficients are constructed both from the census and the LIK dataset.

Our second hypothesis is a positive relationship between the level of social multi-group horizontal inequality and the risk of displacement in a community. Our third hypothesis is that there is no relation between vertical inequality and the risk of displacement.

Finally, we aim to examine the effect of ethnic polarization as apotential trigger of violent conflict. The degree of ethnic polarization increases when there are few (equally) large groups with homogeneous characteristics within each group, and differences in a cluster of characteristics among groups [Østby, 2008]. We apply the formula presented in Reynal-Querol and Montalvo [2005]:

$$RQ = 1 - \sum_{r=1}^{N}(\frac{1/2 - \pi_r}{1/2})^2 * \pi_r \tag{3}$$

where π_r denotes the population share of ethnic group i in a country. The RQ measure ranges from 0 (no ethnic polarization) to 1 (highest ethnic polarization). In our sample, it ranges from 0 to 0.976.

4 Descriptive Statistics

4.1 Community Level

Displacement mostly took place in Osh City where almost 35 percent of households indicate that they left their houses due to the violent riots in June 2010

(Table 4, Figure 1). In the southern oblasts of Djalal-Abad and Batken approximately 5.3 percent of families were displaced. Nationwide, 2.6 percent of individuals report displacement and 7.3 percent answer that they know someone who was displaced due to the riots. Overall, 9.9 percent of respondents indicate that they either know someone who was displaced or were displaced themselves. International Organizations estimate that approximately 400,000 people were displaced during the riots. Our data show a similar trend (Table 1).

In the following, firstly, we summarize our summary statistics on the census data. Second, we show descriptive statistics on the LIK data.

Table 5 shows high correlations between 2-group (2HI) and multi-group (GCOV) horizontal inequalities. The share of displacement in a community is significantly correlated with both measures while the ethnic polarization measure (RQ) only shows little correlation. We do not find any significant correlation between the Gini coefficient (= vertical inequality) and displacement.

Table 6 reports shares of schooling from the census for the whole population and Kyrgyz and Uzbeks, respectively. We see that the average education level is similarly distributed across all oblasts, with one exception: Osh City. 68 percent of Kyrgyz have secondary or higher education while only 52% of Uzbeks have that level of education.

As expected, in Table 7, we find that social two-group HI between Uzbeks and Kyrgyz reach the highest values in the city of Osh (0.233). This is also true for multi-group HI (GCOV) (0.13). Ethnic polarization (RQ) is highest in Osh City (0.953) but also shows high values in Bishkek and Chui (0.821 and 0.809). Vertical Inequality does not largely differ among oblasts, however, with 0.29, it is relatively low in the city of Osh. The high polarization measures in the northern part of Kyrgyzstan might stem from the fact that many different ethnicities such as Russians, Dungans, Uigurs and Tartars live there. Overall, our descriptive statistics of the census data show that horizontal inequalities are highest in the city of Osh. The social Gini coefficients is particularly high in rural areas, indicating that horizontal and vertical inequalities do not follow the same trend.

Table 8 summarizes two- and multi-group horizontal inequalities, ethnic polarization and vertical inequalities for education (social) and employment (economic) from the LIK data. Similarly to our findings from the census, social and economic two-group HI between Kyrgyz and Uzbeks are highest in Osh City (0.243 and 0.186) while the social multi-group HI shows high values in Bishkek

(0.09) and the surrounding Chui oblast (0.11), too [6]. Vertical Inequalities follow a different trend with high social inequality in Chui (0.126).

4.2 Individual Level

Our descriptive statistics on the individual level (Table 9) show that women and Uzbeks were prevalent victims of displacement. Elderly over 60 years were less likely to flee, while 25 to 40-year-old were more likely to leave their home due to the riots. This is also a common finding from the literature [Todaro and Smith, 2003]. Having a job had a negative impact on displacement indicating that employees rather stayed at home in order to keep their jobs. Further, families with more children were displaced more often than others. Particularly, families in urban regions were hit by displacement.

5 Econometric Strategy

In this paper, we aim at studying two distinct phenomena. First, we run community-level regressions to assess the determinants of violent incidences during the June riots, as proxied by the share of displaced households. Here, we want to exame in particular the effect of horizontal inequalities on conflict and displacement. The outcome variable is the share of displaced families in a community. We estimate OLS re- gressions and cluster at the rayon level. Standard errors are bootstrapped (sounds good, but why?). Following the literature [Mancini, 2005, ?stby et al., 2011], in all community- level regressions, we control for total population (log-transformed), active part of population, region dummies (north, south and mountainous 5), migrants in the community, urban/rural composition, economic development of the community (measured by access of the population to drinking water), and an indicator of community participation equal to one if community meetings take place.

Second, we analyze the determinants of individual displacement given the occurrence of violence in the community. The outcome variable is a binary variable equal to one if the respondent states to have been displaced. Here, we estimate a probit model and introduce community fixed effects.

In all individual-level regressions, we control for socio-economic and demographic characteristics of the individuals, such as age, sex, ethnicity, shocks the

[6] In the LIK data, no Uzbeks are interviewed in Issyk-kul province, so that there are no respective values for inequalities. Further, very few Uzbeks are interviewed in Talas province. Hence, variables have to be treated with caution in these oblasts.

family experienced before riots (cold winter), chronic illness, assimilation factors such as Kyrgyz as a foreign language, as well as a dummy for birth in same community, group membership history, land in hectar that family owns and a dummy for land possession, education, restrospective data on employment, household composition (elderly, young and older children), current migrants (only those who have left before the tension started), experience abroad [7], an index of relative wealth compared to other households in the same community [8], and distance to the next agricultural market as a measure of isolation. We are confident that all included control variables have not been subject to a change due to or during the riots. In our main specification for the individual-level regression, we do not include experienced violence as an explanatory variable as we do not know from the data if the violence was experienced due to the riots. However, we run one specification with an indicator of violence to examine the impact on displacement. To control for unobserved correlations in the observations within communities, all individual-level equations are estimated with fixed effects at the community level. The fixed effects model eliminates all observed and unobserved community characteristics that are constant across individuals from the same community, removing the bias in the estimation of displacement that is caused by individual-invariant community characteristics if these community effects do not interact with household and individual characteristics. Since it is possible that some unobservable data on local characteristics are correlated with the displacement decision, the fixed effects specification helps us to control for this correlation.

6 Results

First, we describe our results on the community and then on the individual-level. With the census data, we can only examine the effect of social horizontal inequalities as measured in level of education. With the LIK data, we also examine the effect of economic horizontal inequality as measured in the share of population having a paid job as a sensitivity check.

[7] We checked for individuals who report to have been abroad and displaced at the same time. There are no overlaps, thus, all individuals who report to have been abroad have international experience irrespective of displacement due to the riots.

[8] This index was developed by Mueller and Vothknecht (2011).

6.1 Community Level

In specification one in Table 10, we examine the effect of vertical inequality, measured as the Gini coefficient regarding the educational level, on displacement. All models do not show any significant effect of vertical inequalities. This is also in line with the literature [Østby, 2008, Mancini, 2005] This finding supports our descriptive statistics, where no correlation between vertical inequality and displacement could be found. In the second specification, we include the social multi-group inequality measure. We find a significant and positive effect of social multi-group horizontal inequalities between all ethnic groups in Kyrgyzstan. This effect stays significant when introducing the Gini coefficient to the model in the third specification. Knowing that there is a significant effect of horizontal inequality, we restrict our analysis to two-group inequalities between Kyrgyz and Uzbeks (specifications 4-7).

The coefficients of the 2HIs are significant and positive, indicating that horizontal inequalities between Kyrgyz and Uzbeks are important drivers of displacement in Kyrgyzstan. Our results are also robust to adding either ethnic polarization measure or the share of Uzbeks in the community. The share of Uzbeks in the community shows to have a strongly positive effect on displacement. The coefficient of social 2HI becomes slightly smaller but stays significant. In contrast, standard measures of inequality such as Gini coefficient and ethnic diversity show to have no significant impact on the likelihood of communal displacement [Mancini, 2005]. The variable measuring social two-group horizontal inequality is strong and significantly related to conflict at the 10% level. The latter might not seem very impressive, but given the relatively small sample with hardly significant or non-significant results of variables such as population size or unemployment rates, 10% significance should be considered convincing. For a community with mean values on all explanatory factors and low levels of horizontal inequality, the probability of displacement is 4.65 percent (MARC: is that correct? How can we interpret it differently?). This finding is consistent with conclusions from other case studies on the onset of conflict [Østby, 2008, Mancini, 2005, Stewart, 2002] that demonstrate that sharp social inequalities between ethnic groups have a major impact on the outbreak of civil war. As we have already seen in our descriptive statistics, displacement is more prevalent in the south.

In Table 11, we estimate the models with inequality measures based on the LIK dataset for robustness and comparison. Our findings are similar to the

census results. There is no significant effect of vertical inequalities supporting our hypothesis that vertical inequalities do not matter in the Kyrgyz case. The effect of multi-group HI is only significant when looking at it separately (specification 2). When introducing vertical inequality, it turns to be insignificant. The 2HI inequality measure is again significant and positively related to forced displacement. This effect stays significant when introducing variables such as ethnic polarization and the share of Uzbeks in a community. The effect of social horizontal inequality is significant at the 5% level. As expected, we find that social meetings in the community decrease displacement risk, indicating that communities with higher citizen participation are less likely to be affected by conflict.

6.2 Individual Level

At the individual level, we run four different specifications, as displayed in Table 8. The first specification is for the whole sample, the second is for men, the third for women and the fourth for the Osh city and oblast only where most diplacement took place. Overall, coefficients are similar across all specifications: women and Uzbeks are more likely to be displaced, confirming our descriptive statistics and reports by international organizations. Being a member of any group decreases the likelihood of displacement for women and Osh residents. Higher likelihood of displacement for women is a common finding from the literature [Carrington et al., 1996]. Having at least one household member who has been abroad for at least one month has a positive effect on displacement, indicating a higher mobility among those who have contacts abroad. Being relatively wealthy compared to others in the community decreases the propensity of displacement. This could be explained by the fact that wealthier families can invest in precautionary measures such as fences or better door lockers. As expected, having small children in the family increases the likelihood of displacement, maybe also to prevent any bad to happen to the children. Young individuals between 25 and 40 years are more likely to leave their home while elderly rather tend to stay [Todaro and Smith, 2003]. Less educated people are less likely to flee when they live in Osh, while the propensity for technical graduates is significantly higher compared to the baseline category of secondary schooling. Interestingly, the experience of a cold winter before the riots increases the probability to be displaced. This might be due to the fact that shock-affected households are in general more vulnerable to any types of shocks. Our proxy

of assimilation in the community, indicating if the respondent was born in the community, is negatively significant in the Osh specification, showing that those who are deeply-rooted in their community of origin (at least in Osh oblast) are less likely to flee. This finding is consistent with the second proxy of integration: being member of a group since before the crisis. Being engaged in any group activity decreases the likelihood significantly for women.

In Table 8, we interact being female with household wealth (specification 1). Women in wealthier households are found less likely to flee compared to women in poorer households. Specification 2 introduces an indicator measuring experienced violence on the household level [9]. The likelihood to be displaced increases significantly by 4.4 percentage points if the household reports to have experienced violence, while other major explanatory variables such as being female or Uzbek are still highly significant. The third specification examines the subsample of people who indicate to know someone who experienced violence and was heavily injured or died because of the incidence. The effect of education becomes clearer here: respondents with university degree are less likely to be displaced while people with only basic education are more likely to leave their houses.

7 Sensitivity Checks

As a sensitivity check, we generate an indicator of economic horizontal inequality on the basis of the following variables from the LIK survey: ethnicity and retrospective data on employment [10] [11].

From the descriptive statistics in Table 8, we see that economic multi-group HI is high in Bishkek (0.10) and Chui (0.09) indicating that differences might also stem from differences between other groups (such as Russians, Dungans etc). Vertical Inequalities follow a different trend with high social inequality in Chui (0.126) and high economic inequality in Naryn oblast (0.242).

Results are shown in Table 14. We find similar but weaker results com-

[9] As noted above, we cannot distinguish violence that took place before the riots or due to the riots

[10] We generate the binary variable *paid job*, when the individual (over 18) reports that she/he has a paid job (either employee, employer or self-employed). It is zero if the person reports to be unemployment, family worker or inactive.

[11] Unfortunately, we cannot use our data on assets or wealth because we do not have information about them from before the conflict. Employment history and education are the only variables we are able to use to construct Horizontal Inequalities as they were before June 2010.

pared to social HIs. There is no significant effect of vertical inequalities and multi-group horizontal inequality. Economic two-group horizontal inequality is significant at the 10% level. We should be aware of the fact that, even if we measure economic horizontal inequality, we still measure inequality in outcomes in terms of employment opportunities and not inequality in inputs in terms of household assets or income. Regarding the control variables, a higher share of migrants has a positive effect on displacement which could be interpreted as higher mobility in the community.

8 Conclusion

What triggered the violent conflict in June 2010 in Kyrgyzstan and who was affected by it? This paper aims at giving some answers to these questions. First, we analyze the effect of horizontal and vertical inequalities on the community-level likelihood of displacement. Second,, we study the in- dividual characteristics of displaced citizens in more detail. We draw on a unique micro-level dataset from Kyrgyzstan and data from the census 2009. Our results show that social and economic horizontal inequalities between Kyrgyz and Uzbeks have been strong predictors for the occurrence of violence, as measured by displacement. However, vertical inequalities do not have any effect on the conflict outrage. Further, we find that women and Uzbek were more likely to leave their homes during the tension episode. Additionally, we detect some individual-specific effects of displacement after controlling for community fixed-effects. Stewart [2002] mentions that not all countries with high HIs experience ethnic conflict. It is therefore important to investigate when high HIs lead to conflict and when they do not. While many of the above cited analyses include

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Table 1: Displacement Infomation by International Organizations

Institution	Estimates	Notes
Internal Displacement Monitoring Center	300,000 IDP's 90,000 refugees 381 dead 2,000 houses destroyed	Refugees primarily Uzbek women, children and elderly fled to Uzbekistan
Kyrgyzstan Inquiry Commission	110,000 refugees 2,677 destroyed houses 2,800 injured	Mostly women and children
UN High Commission for refugees	300,000 IDP's 100,000 refugees	short-term displacement refugees: 54% children, 47% women, 3% men (elderly and wounded)
UN Office for the Coordination of Humanitarian Affairs	335 dead 1,080 hospitalized 2,325 injured	June, 28 2010: all refugees have left Uzbekistan, except for 395 who need medical treatment
UN Institute for Training and Research	2,843 affected buildings in the cities of Osh, Jalalabad and Bazar-Kurgan	
World Food Program	food assistance to 280,000 persons, first estimations were as high as 550,000	
In comparison:		
Life in Kyrgyzstan Survey	2.58% of indivduals report displacement due to June riots; corresponds to 145,000 displaced (no differentation between IDP's and refugees); about 7.3% know someone who was displaced; 9.91% report own displacement or knowing someone (545,900 displaced).	Gender differences, short-term displacement (1-12 weeks); 15% stayed in refugee camps in Kyrgyzstan, 12.5% went to Uzbekistan

Table 2: Replacement statistics of LIK

	N	%
Replacement		
Household in main list and participated	2,186	72.87
Household in reserve list and participated	814	27.13
Total	3,000	100
Reasons for replacement		
Refused to participate	523	64.17
Household members were absent	127	15.58
Housing was vacant	94	11.53
Housing not found	33	4.05
Other Reason	38	4.67
Total	815	100

Reasons for replacement under 1% are summarized in *Other Reason*.

Source: LIK 2010.

Table 3: Replacement Statistics: Differences between southern and northern oblasts

	North	South	diff
Refused to participate	.229	.104	.125***
Housing was vacant	.037	.023	.014**
Family members absent	.047	.035	.012*
Housing not found	.015	.005	.010***

	Non-conflict	Conflict	diff
Refused to participate	.213	.106	.107***
Housing was vacant	.033	.028	.005
Family members absent	.043	.040	.003
Housing not found	.013	.006	.007*

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Southern oblasts include the three oblasts of Batken, Jalalabad and Osh. Conflict-affected oblasts are Osh and Jalalabad where most of displacement took place during the riots in June 2010.

Source: LIK 2010.

Table 4: Summary Statistics: Displacement per oblast (province)

Oblast	N (HH)	Household Displacement	N (Ind)	Individual Displacement
Issyk-kul	273	0	620	0
Djalal-Abad	474	.053	1308	.033
Naryn	125	0	339	0
Batken	224	.054	629	.035
Osh	474	.046	1620	.027
Talas	124	0	285	0
Chui	549	.005	1513	.003
Bishkek City	594	.002	1370	.001
Osh City	150	.333	426	.225
Total	2987		8110	

Household displacement is a binary variable equal to one
if any household member reports that he/she was displaced.
Individual displacement is a binary variable equal to one
if an individual reports that he/she was displaced.
Source: LIK 2010.

Table 5: Correlation Between Displacement, Horizontal Inequality, ethnic polarization and Gini coefficient (Census Education)

	Displ	HI	GCOV	RQ	Gini
Displ	1.00***				
HI	0.323**	1.00***			
GCOV (GC)	0.372***	0.485***	1.00***		
RQ	0.181*	-0.112	0.523***	1.00***	
Gini (G)	0.031	0.112	0.020	-0.266***	1.00***

All figures on community/village level.

Source: Census 2009.

Table 6: Summary Statistics: Education per oblast (province)

	%All		%Kyrgyz		%Uzbek	
Oblast	Mean	SD	Mean	SD	Mean	SD
Secondary or higher Education (Census)						
Issyk-kul	.570	.040	.578	.035	.524	.048
Djalal-Abad	.596	.026	.610	.035	.529	.062
Naryn	.575	.028	.575	.028	.655	.200
Batken	.643	.056	.647	.047	.623	.076
Osh	.595	.036	.620	.026	.577	.054
Talas	.567	.033	.577	.021	.483	.034
Chui	.540	.042	.578	.036	.528	.055
Bishkek City	.672	.009	.690	.017	.677	.010
Osh City	.603	.	.679	.	.520	.

All numbers on community level.

Source: Census Kyrgyzstan 2009.

Table 7: Summary Statistics: Horizontal Inequalities and Ethnic Polarization (Census Data)

Oblast	HI Educ	GC Educ	RQ	Gini Educ
Issyk-kul	.123	.048	.396	.322
Djalal-Abad	.86	.041	.714	.337
Naryn	.124	.010	.042	.335
Batken	.047	.020	.609	.323
Osh	.080	.060	.726	.342
Talas	.162	.038	.203	.347
Chui	.088	.068	.809	.332
Bishkek City	.38	.041	.821	.231
Osh City	.233	0.13	.953	.293

All numbers on community/level level.
HI Educ refers to 2-group horizontal inequality
between Kyrgyz and Uzbeks regarding at least secondary education.
GC Educ refers to multi-group horizontal inequality regarding
at least second education.
RQ (Montalvo&Reynal-Querol) is an index for ethnic polarization.
Source: Census Kyrgyzstan 2009.

Table 8: Summary Statistics: Horizontal and Vertical Inequality (LIK)

Oblast	HI Educ	HI Econ	GC Educ	GC Econ	RQ	Gini Educ	Gini Econ
Issyk-kul	0	0	.022	.063	.313	.047	.185
Djalal-Abad	.060	.060	.017	.025	.293	.084	.206
Naryn	.002	.142	.003	.084	.154	.064	.242
Batken	.051	.067	.013	.020	.155	.063	.209
Osh	.033	.023	.010	.010	.131	.112	.238
Talas	.042	.10	.024	.090	.192	.056	.205
Chui	.016	.033	.120	.090	.512	.126	.216
Bishkek	.110	.082	.090	0.11	.674	.031	.192
Osh City	.243	.186	.093	.038	.461	.090	.217

All numbers on community/village level.

HI Educ refers to 2-group horizontal inequality between Kyrgyz and Uzbeks regarding schooling.

HI ECon refers to 2-group horizontal inequality between Kyrgyz and Uzbeks regarding employment.

GC Educ refers to multi-group horizontal inequality between Kyrgyz and Uzbeks regarding education.

GC Econ refers to multi-group horizontal inequality between Kyrgyz and Uzbeks regarding employment.

Source: LIK 2010.

Table 9: Summary Statistics: Differences between displaced and non-displaced persons

	Not Displaced	Displaced	diff
Ind. Characteristics			
Age group1 (18-25) (d)	.2416	.2679	.0263
Age group2 (25-40) (d)	.2917	.3492	-.0575*
Age group3 (40-50) (d)	.1966	.1961	.0005
Age group4 (50-60) (d)	.1541	.1244	.0297
Age group5 (over 60) (d)	.1158	.0622	.0536**
Male (d)	.4750	.3349	.1400***
Married (d)	.6795	.7416	-.0620*
Single (d)	.1836	.1722	.0113
Kyrgyz language (d)	.6719	.4163	.2556***
Uzbek (d)	.1113	.5406	-.4292***
Group (d)	.0269	.0287	-.0017
Educ and work			
Primary (d)	.0349	.0430	-.0081
Basic (d)	.0980	.138	-.0406*
Technical (d)	.0465	.0478	.0020
University (d)	.1592	.1913	-.0321
Employee (d)	.5001	.4047	.0953*
Selfempl (d)	.3572	.5119	-.1546***
Familyworker (d)	.1299	.0476	.0823**
Employed (d)	.5176	.4038	.1137***
Unempl (d)	.0369	.0096	.0273**
Inactive (d)	.4454	.5865	.0361*
HH Characteristics			
Hsize	5.292	5.401	-.1101
Depend ratio	55.84	69.90	-14.05***
Elderly	.2641	.2009	.0631*
Small child (0-5)	.6735	.9234	-.2498***
Child (5-18)	1.133	1.287	-.1538*
Urban (d)	.3721	.5693	-.1972***

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Dependent Variable: Displacement in Community (Census Education Data)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vertical Inequality	.0183		-.739		-.151	-.314	-.596
	(.393)		(.474)		(.342)	(.364)	(.403)
Multi-Group horizontal inequality		.123**	.15**				
		(.006)	(.007)				
Two-Group horizontal inequality				.465*	.472*	.465*	.436*
				(.243)	(.249)	(.248)	(.228)
Ethnic Polarization						.0738	
						(.0452)	
Share of Uzbeks							.315**
							(.146)
Population	-.0966	-.122	-.285	-.0687	-.101	-.17	-.187
	(.205)	(.178)	(.188)	(.187)	(.191)	(.184)	(.18)
Employed	.104	.116	.259	.0791	.108	.159	.154
	(.198)	(.18)	(.181)	(.192)	(.191)	(.183)	(.175)
Meeting	-.001	-.0001	.0001	-.0003	-.0003	.0001	-.001
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Migrant	.002	.001	.001	.002	.002	.002	.002
	(.0012)	(.001)	(.001)	(.001)	(.002)	(.001)	(.001)
Economic Development	.0397	.0373*	.0396*	.0217	.022	.0207	.0181
	(.0255)	(.0219)	(.0222)	(.0226)	(.0228)	(.0219)	(.0206)
Urban	.043	.025	-.011	.027	.021	.008	-.002
	(.0505)	(.0296)	(.0273)	(.0306)	(.0354)	(.0349)	(.0309)
South	.0518	.0562*	.0661**	.0736**	.0757**	.0597	.0269
	(.0331)	(.0301)	(.0328)	(.0346)	(.0364)	(.0365)	(.0384)
North	-.0107	-.0161	-.0157	.0242	.0251	.00171	.0479*
	(.0323)	(.0296)	(.0273)	(.0256)	(.0263)	(.0327)	(.0278)
Constant	-.116	-.005	.445	-.189	-.103	.124	.466
	(.431)	(.203)	(.41)	(.22)	(.339)	(.387)	(.423)
N	120	120	120	120	120	120	120
R^2	0.240	0.259	0.276	0.240	0.241	0.253	0.295

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 11: Dependent Variable: Displacement in Community (LIK Education Data)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vertical Inequality	.305		.241		.326	.324	.249
	(.228)		(.247)		(.24)	(.243)	(.24)
Multi-Group horizontal inequality		.23*	.19				
		(.0135)	(.0147)				
Two-Group horizontal inequality				.29**	.295**	.276**	.274**
				(.137)	(.137)	(.139)	(.132)
Ethnic Polarization						.0182	
						(.0295)	
Share of Uzbeks							.248
							(.154)
Population	.007	.009	.008	-.001	-.001	-.002	-.025
	(.0208)	(.0212)	(.0209)	(.0184)	(.0182)	(.0183)	(.0224)
Unemployed in Community	-.004	.071	.038	.032	-.0002	-.008	.021
	(.177)	(.171)	(.173)	(.169)	(.165)	(.169)	(.165)
Meeting	-.002	-.001	-.002	-.002	-.002*	-.002*	-.002
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Migrant	.002	.002	.002	.002	.002	.002	.002
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Urban	.0506*	.0263	.041	.0168	.0346	.0326	.029
	(.0295)	(.0283)	(.0265)	(.0261)	(.0257)	(.026)	(.0242)
Economic Development	.0386	.0444*	.0426*	.034	.0326	.0338	.0285
	(.025)	(.0266)	(.0255)	(.0263)	(.0254)	(.0256)	(.0242)
South	.0473	.0567*	.0496	.0478*	.0381	.0403	-.0004
	(.035)	(.0329)	(.0353)	(.0273)	(.0302)	(.0307)	(.0326)
North	-.0304	-.0373	-.0434	-.019	-.0324	-.0374	-.0054
	(.0307)	(.0313)	(.0323)	(.0239)	(.0289)	(.0311)	(.0293)
Constant	-.124	-.139	-.136	-.0338	-.0331	-.0312	.211
	(.223)	(.225)	(.224)	(.199)	(.2)	(.201)	(.24)
N	120	120	120	118	118	118	118
adj. R^2	0.129	0.131	0.136	0.179	0.196	0.191	0.229

Bootstrapped standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 12: Dependent Variable: Displacement on Individual Level - Victimization

	(1)	(2)	(3)	(4)
Displacement	All	Men	Women	Osh
Age group1 (d)	.0538	-.00171	.284*	.166*
	(.0407)	(.0277)	(.147)	(.0999)
Age group2 (d)	.0595	.00339	.281**	.191*
	(.0403)	(.03)	(.131)	(.103)
Age group3 (d)	.0627	.0291	.252*	.103
	(.0468)	(.0467)	(.147)	(.0964)
Age group4 (d)	.0319	-.0173	.295*	.147
	(.039)	(.0171)	(.172)	(.114)
Age group5 (d)	.0346	.0281	.212	.0563
	(.0478)	(.0677)	(.172)	(.098)
Female (d)	.0257***			.0492**
	(.00782)			(.0207)
Uzbek (d)	.0429**	.0021	.0817**	.191***
	(.0201)	(.0224)	(.036)	(.0713)
Kyrygz as foreign*Uzbek (d)	.00113	.0261	-.0224	-.0152
	(.0133)	(.0283)	(.0192)	(.0319)
Shocks cold winter (d)	.136**	.00596	.248**	.
	(.0661)	(.038)	(.121)	.
Chronic illness (d)	.00238	-.0012	.0104	-.0115
	(.0101)	(.0125)	(.0195)	(.0256)
Born in comm (d)	-.0212	-.00456	-.037	-.108***
	(.0134)	(.0163)	(.0238)	(.04)
Primary (d)	-.0143	.0247	-.00503	-.0583**
	(.012)	(.0496)	(.0316)	(.0297)
Basic (d)	-.00898	-.00846	-.0014	.0302
	(.0108)	(.0143)	(.0233)	(.054)
Technical (d)	.0367	.0185	.0269	.164*
	(.0317)	(.0371)	(.0541)	(.0971)
University (d)	-.00207	.00972	-.00813	.0259
	(.0092)	(.0133)	(.0161)	(.0272)
Job (d)	-.0138*	-.00566	-.0294**	-.0262
	(.00823)	(.0119)	(.0139)	(.0232)
Unempl (d)	-.00623	-.00964	.0129	-.053
	(.0139)	(.0175)	(.0325)	(.0341)
Group member (d)	-.0214	-.0133	-.0592***	-.0496
	(.0171)	(.0145)	(.00943)	(.0452)
Land (d)	-.00518	-.0143	-.0105	.0081
	(.0171)	(.021)	(.034)	(.059)

	(1)	(2)	(3)	(4)
Displacement	All	Men	Women	Osh
Isolation	.00197	-.00215	.00546	.0036
	(.00227)	(.00461)	(.00437)	(.00531)
Experience abroad (d)	.0146	-.0131	.0459**	.0239
	(.0107)	(.00905)	(.0222)	(.0253)
Current migr (d)	-.00807	-.0105	-.00434	-.0512**
	(.00807)	(.00991)	(.0161)	(.0199)
Relative wealth	-.0309**	-.0542***	-.0135	-.115***
	(.0155)	(.0202)	(.0315)	(.0385)
Elderly	.0052	.0138	-.00276	.0123
	(.00824)	(.013)	(.0149)	(.0214)
Child small	.0132***	.0146***	.0137*	.0086
	(.00388)	(.00549)	(.00733)	(.00975)
Child middle	.0000653	-.00365	.000194	.00515
	(.00326)	(.00414)	(.00626)	(.00879)
N	1491	478	763	814
pseudo R^2	0.335	0.348	0.338	0.344

Marginal effects; Standard errors in parentheses

(d) for discrete change of dummy variable from 0 to 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

All regressions include community fixed effects.

Table 13: Dependent Variable: Displacement on Individual Level - Victimization

Displacement	(1)	(2)	(3)
Int Female*Wealth2 (d)	-.0225*		
	(.0128)		
Int Female*Wealth3 (d)	-.022*		
	(.0132)		
Wealth2 (d)	.0222		
	(.053)		
Wealth3 (d)	-.0231		
	(.0234)		
Conflict Indicator (d)	.	.0444***	.
	.	(.0156)	.
Age group1 (d)	.0552	.0484	.111
	(.0413)	(.0392)	(.349)
Age group2 (d)	.0622	.0555	.213
	(.0413)	(.0396)	(.354)
Age group3 (d)	.0631	.0594	.138
	(.047)	(.046)	(.344)
Age group4 (d)	.0328	.029	.231
	(.0397)	(.038)	(.423)
Age group5 (d)	.032	.0269	-.133***
	(.0468)	(.0438)	(.0353)
Female (d)	.0427***	.0246***	.135**
	(.0138)	(.0075)	(.0578)
Kyrygz as foreign*Uzbek (d)	.00117	-.000143	-.0227
	(.0136)	(.0128)	(.101)
Uzbek (d)	.0444**	.04**	.16
	(.0207)	(.0195)	(.139)
Schocks (d)	.14**	.116*	.00171
	(.068)	(.0612)	(.132)
Chronic illness (d)	.00277	.000582	.0822
	(.0104)	(.00974)	(.0904)
Born in community (d)	-.0227	-.0253*	-.108
	(.0142)	(.0138)	(.137)
Primary (d)	-.0152	-.0162	-.0184
	(.0118)	(.0108)	(.19)
Basic (d)	-.0103	-.00829	.84***
	(.0108)	(.011)	(.139)
Technical (d)	.0371	.0407	.224
	(.0321)	(.0324)	(.228)
University (d)	-.00296	-.00186	-.153**
	(.00935)	(.00919)	(.0734)
Job (d)	-.0147*	-.0144*	-.0253
	(.00847)	(.00827)	(.0682)
Longterm unempl (d)	-.00526	-.0062	-.117***
	(.0142)	(.0137)	(.0395)
Group member (d)	-.0196	-.0197	-.0934
	(.021)	(.018)	(.0581)
Land (d)	-.00593	-.00193	.165
	(.0174)	(.0164)	(.176)

Displacement	(1)	(2)	(3)
Isolation	.00232	.0016	-.0139
	(.00228)	(.00228)	(.0268)
Live abroad (d)	.0159	.0128	.00311
	(.0113)	(.0104)	(.073)
Current Migrant(d)	-.00837	-.00804	-.0333
	(.00837)	(.00807)	(.0791)
Elderly	.00514	.00646	.178
	(.00847)	(.00816)	(.12)
Child small	.0136***	.0128***	.139***
	(.00399)	(.00385)	(.0476)
Child middle	.000538	-.000775	.0277
	(.00332)	(.00324)	(.0254)
Relrank wealth		-.0287*	-.433***
		(.0159)	(.14)
N	1491	1491	175
pseudo R^2	0.338	0.344	0.507

Marginal effects; Standard errors in parentheses

(d) for discrete change of dummy variable from 0 to 1

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

All regressions include community fixed effects.

Table 14: Dependent Variable: Displacement in Community (LIK Employment Data)

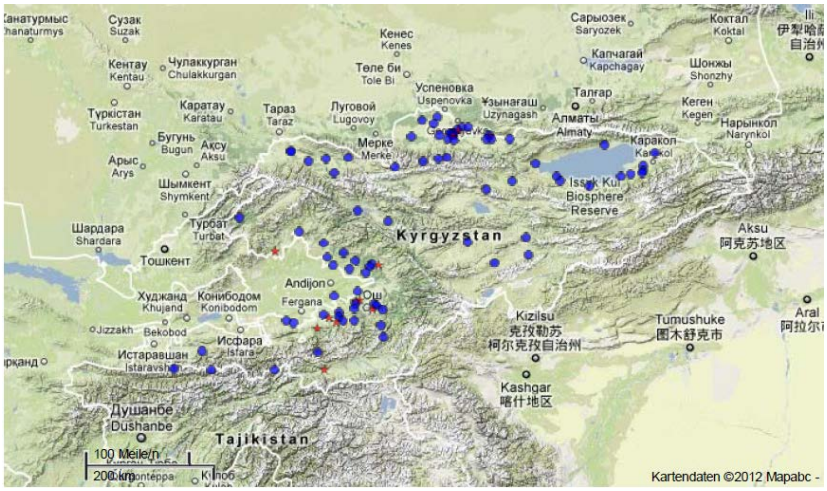
	(1)	(2)	(3)	(4)	(5)	(6)
Vertical Inequality	-.113	-.125		-.189	-.178	-.165
	(.235)	(.237)		(.229)	(.228)	(.226)
Multi-Group horizontal inequality		.06				
		(.009)				
Two-Group horizontal inequality			.231*	.237*	.218	.212*
			(.127)	(.128)	(.134)	(.123)
Ethnic Polarization					.021	
					(.0337)	
Share of Uzbeks						.267*
						(.149)
Population	.00773	.00715	.00374	.00335	.00248	-.0223
	(.0212)	(.0212)	(.0192)	(.0192)	(.0193)	(.0216)
Unemployed in Community	.0327	.0211	-.0747	-.0668	-.0682	-.0413
	(.18)	(.185)	(.189)	(.189)	(.188)	(.188)
Meeting	-.001	-.001	-.001	-.001	-.001	-.001
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Migrants	.002	.002	.003*	.003*	.003*	.003
	(.002)	(.002)	(.001)	(.001)	(.002)	(.001)
Economic Development	.0407	.0429	.0472*	.0488*	.0491*	.0427*
	(.0264)	(.0275)	(.027)	(.0272)	(.0273)	(.0257)
Urban	.0318	.0291	.0224	.0189	.0167	.0178
	(.0306)	(.0305)	(.0275)	(.0274)	(.0268)	(.0266)
South	.0576*	.0614*	.0555*	.0578**	.0596**	.013
	(.0332)	(.0338)	(.029)	(.0295)	(.0298)	(.0349)
North	-.0172	-.0177	-.0131	-.0118	-.0182	.0131
	(.0283)	(.0293)	(.0239)	(.0246)	(.0282)	(.0238)
Constant	-.0999	-.0965	-.0911	-.0512	-.0471	.21
	(.228)	(.228)	(.206)	(.209)	(.208)	(.219)
N	120	120	118	118	118	118
adj. R^2	0.110	0.103	0.168	0.165	0.160	0.205

Bootstrapped standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 1: Displacement in Kyrgyzstan

Figure 1: Displacement in Kyrgyzstan



Source: LIK 2010. Blue circels: no displacement. Red Stars: at least 10% displacement in community.