Deepening or Diminishing Ethnic Divides? The Impact of Urban Migration in Kenya
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Eric Kramon
George Washington University

Sarah Baird
George Washington University

Joan Hamory
University of Oklahoma

Edward Miguel
University of California, Berkeley

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Eric Kramon   George Washington University
Joan Hamory   University of Oklahoma
Sarah Baird   George Washington University
Edward Miguel   University of California, Berkeley and NBER

Abstract: *The impact of urban migration on ethnic politics is the subject of long-standing debate. "First-generation" modernization theories predict that urban migration should reduce ethnic identification and increase trust between groups. "Second-generation" modernization perspectives argue the opposite: Urban migration may amplify ethnic identification and reduce trust. We test these competing expectations with a three-wave panel survey following more than 8,000 Kenyans over a 15-year period, providing novel evidence on the impact of urban migration. Using individual fixed effects regressions, we show that urban migration leads to reductions in ethnic identification; ethnicity's importance to the individual diminishes after migrating. Yet urban migration also reduces trust between ethnic groups, and trust in people generally. Urban migrants become less attached to their ethnicity but more suspicious. The results advance the literature on urbanization and politics and have implications for the potential consequences of ongoing urbanization processes around the world.*

Urbanization is shifting the landscape of countries around the world. In Africa, the urban population has doubled since 1999, and by 2040, over 50% of the population is projected to reside in urban areas (United Nations [UN] 2014). Although the growing importance of urbanization in Africa and elsewhere is obvious, we are only beginning to uncover its political consequences.

A long-standing debate centers on expectations about urbanization's impact on *ethnic politics*. According to "first-generation" modernization theories, urban migration should decrease the importance of ethnic identities. As urban migrants work in the urban economy, grow less dependent on land and

social ties in rural areas, and come into contact with other groups, ethnic identities are expected to be displaced by broader identities such as class or nation, while trust between groups is expected to increase (Gellner 1983; Green 2014; Lerner 1958; Robinson 2014). "Second-generation" modernization theory suggests the opposite: Urbanization could make ethnic ties more salient (Bates 1983; Eifert, Miguel, and Posner 2010; Melson and Wolpe 1970). This literature emphasizes that urban migrants often compete for jobs and resources with members of other groups and rely on ethnic networks for jobs, housing, and assistance in urban areas (Bates 1983; Posner 2005). These competitive dynamics, and the instrumental value of ethnic ties in

urban areas, can amplify the importance of ethnic identities and reduce trust between groups. The literature thus offers competing expectations. *Does urban migration diminish or amplify ethnic identification? Does it reduce or increase trust across ethnic lines?*

We address these questions using a unique longitudinal survey, the Kenya Life Panel Survey (KLPS), which repeatedly surveyed more than 8,000 Kenyans over a 15-year period.[1] Kenya is an excellent context to test theories about urbanization and ethnicity: It is urbanizing rapidly (Marx, Stoker, and Suri 2019) and ethnicity is salient politically (Bedasso 2017; Ndegwa 1997), economically (Hjort 2014; Marx, Pons, and Suri 2016), and socially (Kasara 2013). The KLPS captures ethnic identification and trust measured at multiple points in an individual's life, which allows us to study how migrants change after moving to an urban area, relative to changes among rural residents. To do so, we estimate the impact of urban residence with regression models that include individual fixed effects.

This approach addresses two challenges to testing theories about urban migration's impact. First, the strong possibility of selective migration—those who migrate to urban areas may be different than those who do not—makes it difficult to distinguish the impact of urban migration from the other, potentially unobserved, differences between individuals who reside in urban and rural areas. Individual fixed effects control for time-invariant differences between respondents, including those that might drive urban migration, which increases confidence that selection bias is not driving the results. Second, theories about urbanization can imply individual-level changes that are expected to occur after migration to urban areas. Our approach more precisely tests theory by examining how individuals change following migration to cities.

Although these data allow us to analyze the impact of urban migration on ethnic identification and trust, one limitation is that the sample is made up of individuals who participated in nongovernmental organization programs that were located in western Kenya. As such, the

data predominantly include respondents who were born in the western region and who are ethnic Luhya. Below, we discuss how our results may generalize beyond this population.

Our findings on ethnic identification are most consistent with "first-generation" modernization perspectives. Migration to a city significantly *decreased* the importance that respondents attached to their ethnic or tribal origin. This effect was especially large for migrants to Kenya's major cities, Nairobi and Mombasa. Urban migration did not, however, reduce the salience of ethnic identity relative to other identities such as class or religion.

Urban migration also significantly *reduced* trust in members of *other* ethnic groups. This reduction was largest in the period before and after Kenya's hotly contested and ethnically charged 2007 elections and the violence that followed. Thus, consistent with "second-generation" expectations, urban residence had a negative effect on interethnic trust during a period of intense political competition between ethnic groups. However, urban migration also reduced general levels of trust in other groups of people, which corroborates Putnam's (2007) expectation that urban migration may, in the short term, reduce trust of both ingroup and outgroup members.

These findings highlight that urban migration can have a mixed influence on ethnic identification and attitudes. While life in urban areas can weaken the strength of individuals' attachment to their ethnic origin, it can also lead to reductions in social trust and a reduction in trust of outgroup members.

This article makes several contributions. Foremost, we provide, to our knowledge, the most credible causal evidence of urban migration's impact that exists in the literature to date. This evidence has important theoretical implications. Expectations of urbanization's impact have featured in several bodies of literature, but empirical challenges have made testing these theories difficult. Although our findings are consistent with studies documenting less ethnic identification (Eifert, Miguel, and Posner 2010; Robinson 2014), less interethnic trust (Kasara 2013), and a lack of interpersonal ethnic bias (Berge et al. 2020) in Africa's urban areas, our results stand on firmer ground as evidence of urban migration's causal influence.[2]

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[1]We preregistered hypotheses, measurement, and model specifications prior to conducting this analysis (https://osf.io/k5z52/). We note which analyses were not prespecified. Although the KLPS data have been analyzed previously for other purposes, none of us had performed the present analysis prior to posting the preanalysis plan. Furthermore, the plan was drafted by one of the authors (EK) prior to their ever accessing the KLPS data. Supporting Information (SI) Appendix B (SI p. 4) presents results for the complete set of prespecified outcomes.

[2]The studies noted here are very clear about this limitation, and their main goals are not always to identify the causal impact of urbanization.

Urbanization and Ethnic Identification and Trust

Existing research highlights that rural-to-urban migration is likely to have important implications for ethnic politics. We are concerned with how urban migration impacts *ethnic identification*—the *importance* individuals attach to their ethnic identity and ethnicity's *salience* relative to other identities such as class or religion—and *trust* within and between ethnic groups.

Modernization theory predicts that urbanization should decrease the importance of ethnic identity. As urban migrants gain more wealth, exposure to diverse forms of information, and jobs in the urban economy, identities such as class or nation are expected to supplant ethnic identities (Gellner 1983; Lerner 1958). Furthermore, because urban migrants are less dependent on land in rural areas, often a domain of ethnic elites, ethnic identification may have less instrumental value for those residing in urban areas (Green 2014). And, because many migrants live and work in ethnically diverse contexts, increased contact with other groups could increase intergroup trust (Allport 1954; Kasara 2013; Robinson 2020), diminishing ethnicity's social, economic, or political importance. Together, this literature suggests that rural-to-urban migration should reduce the importance and salience of ethnic identities and increase trust between ethnic groups.

By contrast, "second-generation" modernization theories predict that urbanization will increase the importance and salience of ethnic identities. This literature emphasizes that ethnic identification, and patterns of ethnic mobilization in politics, appeared to be a product of modernization processes (Kasfir 1979), including urban migration. There are several potential drivers of this pattern. First, migrants to urban areas compete for jobs, resources, and political power, and such competition is often structured along ethnic lines (Bates 1983). Second, urban migrants often rely on ethnic networks to obtain jobs, housing, and social assistance (Posner 2005). Third, experiences of ethnic discrimination or marginalization in urban areas could increase the salience of ethnicity (Bates 1983). In short, heightened competition between ethnic groups and the potential instrumental value of ethnic bonds in urban centers could increase the importance of ethnic identity and reduce trust between groups.

Second-generation research highlights that ethnicity often becomes more salient because of political competition and mobilization (Bates 1983; Eifert, Miguel, and Posner 2010). Thus, the impact of urban residence could be greatest during periods of intense political competi-

tion. It also follows that the nature of political mobilization in urban areas could condition the impact of urban migration. Although early research in African cities substantiates the second-generation position (Wolpe 1974), more recent research suggests that populist, class-based campaign strategies are on the rise (Resnick 2014). If political elites in urban areas are increasingly mobilizing around class-based identities, rather than ethnic ones, we might find reductions in ethnic identification among urban migrants (Thachil 2017).

Patterns of electoral mobilization can, moreover, vary within cities. Klaus and Paller (2017) show that neighborhood ethnic demography shapes Ghana's political parties' decisions to adopt exclusionary (ethnic) or inclusive forms of mobilization in Accra, Ghana. Nathan (2016) shows how neighborhood ethnic demography and socioeconomic characteristics condition the extent of ethnic voting in Accra. This heterogeneity could make it less likely to observe overall changes in ethnic identification and trust among urban migrants.

Competing theories thus generate different predictions. Empirical research generally relies on cross-sectional analyses that compare urban residents to rural ones. Across a number of countries, Robinson (2014) finds that urban Africans are more likely to privilege national over ethnic identity. Kasara (2013), focusing on the impact of ethnic group segregation on interethnic trust, finds that interethnic trust is lower in Kenya's urban areas. Eifert, Miguel, and Posner (2010), focusing on how electoral competition impacts ethnic identification, show that urban residents in Africa are less likely to identify ethnically than rural ones.

While this evidence supports the notion that there are differences between urban and rural residents, a major challenge is determining whether these differences are driven by selection—by the differences between people who choose to migrate to urban areas and those who do not—or by changes that are caused by urban migration, which constrains our ability to adjudicate between competing theoretical perspectives. The goal of this article is to address this challenge.

Urbanization and Ethnic Politics in Kenya

In 1960, before independence, about 7% of Kenyans lived in an urban area (UN 2014). Since then, the urban population has grown to about 27% (World Bank 2016). Kenya's largest city is Nairobi, the capital, with over

3.1 million residents (Kenya National Bureau of Statistics [KNBS] 2009). This size makes Nairobi comparable to other urban centers in Africa, such as Abidjan (Cote d'Ivoire), Accra (Ghana), Addis Ababa (Ethiopia), and Dar es Salaam (Tanzania). The other major city in Kenya is Mombasa (population 938,000), a port city in the east (KNBS 2009).

Kenya is ethnically diverse, with roughly 42 ethnic groups. Five groups make up about 65% of the population: Kikuyu (17%), Luhya (14%), Kalenjin (13%), Luo (10%), and Kamba (10%; KNBS 2009). Whereas rural areas tend to be ethnically segregated, urban migrants and residents often live and work in ethnically diverse neighborhoods (Marx, Stoker, and Suri 2019).

Ethnic divisions have been salient in Kenya since the colonial period. Since independence in 1963, they have played a central role in political competition (Bedasso 2017; Ndegwa 1997). These dynamics have continued and even intensified since the introduction of competitive multiparty politics in the 1990s (Bedasso 2017). While Kenya has for the most part avoided large-scale ethnic violence, lower-level outbreaks of violence have been common.

The notable exception was the post-election violence following the 2007 presidential elections, a close contest that pitted incumbent Mwai Kibaki (an ethnic Kikuyu) against Raila Odinga (an ethnic Luo). After Kibaki was declared the winner, suspicions of electoral fraud led to the outbreak of violence that killed approximately 1,200 people and internally displaced hundreds of thousands. The violence was largely structured along ethnic lines and occurred in urban and rural areas, including Nairobi (Jenkins 2012).

Ethnic divisions are consequential in Kenya's economic and social life. Ethnic differences have been shown to reduce the productivity of workers operating collaboratively in Kenyan firms (Hjort 2014), to reduce the output of teams working on election campaigns (Marx, Pons, and Suri 2016), and to inhibit the capacity of communities to produce local public goods (Miguel and Gugerty 2005). Socially, trust between ethnic groups in the country is relatively low (Kasara 2013).

The Kenya Life Panel Survey

The Kenya Life Panel Survey (KLPS) is a longitudinal data set containing information for thousands of Kenyans. The sample is composed of individuals who participated in one of two previous randomized non-

governmental organization programs—one that provided merit scholarships to upper primary school girls in 2001 and 2002 (the Girls' Scholarship Program [GSP]; Kremer, Miguel, and Thornton 2009), and one that provided deworming medication to primary school students during 1998–2003 (the Primary School Deworming Program [PSDP]; Baird et al. 2016; Miguel and Kremer 2004).

These programs were located in rural parts of Busia District (County) in western Kenya. The sample is therefore composed of those who were in primary school in rural Busia in the late 1990s and early 2000s.[3] As of 2009, 13% of Busia's population lived in an urban area, primarily Busia Town (population 40,000; KNBS 2009). Levels of development in Busia are relatively low: The poverty rate is about 64%, relative to the national rate of 45%, and life expectancy is about 9 years lower than the national average.[4] About 90% of the sample are ethnic Luhya, 5% are Luo, and 3% are Teso.[5]

Our sample is thus composed mainly of ethnic Luhya. Although Luhya politicians have never held the presidency, the group's size has made it important in national politics. The Luhya's importance was underscored in 2002, when both major presidential candidates selected ethnic Luhya as their vice presidential running mates. As such, the Luhya are most representative of ethnic groups that are politically relevant and important in national coalitional politics, and make up a majority of the population in a number of electoral districts, but they have not yet seriously contested or secured the presidency. Many ethnic populations in Africa and elsewhere share these characteristics. Unlike other ethnic groups in Kenya, however, the Luhya vote has historically been more fractionalized, with different Luhya subgroups tending to provide bloc support for different electoral coalitions (MacArthur 2008). In the conclusion, we discuss how our results might generalize beyond our sample population.

Three rounds of data collection have been completed: 2003–7 (KLPS-1),[6] 2007–9 (KLPS-2), and 2011–14 (KLPS-3).[7] Figure 1 describes the timeline. During

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[3]Follow-up survey rounds track individuals to their current residence—throughout Kenya and beyond.

[4]See http://www.busiacounty.go.ke/?page_id=144.

[5]The sample includes several Luhya subgroups, including Samia (46%), Nyala (21%), Marachi (12%), and Khayo (8%).

[6]KLPS-1 data collection entailed first surveying the PSDP sample (2003–5), and then the GSP sample (2005–7).

[7]KLPS-2 data were collected for the deworming subsample only. Three rounds of data have been collected for the deworming

FIGURE 1 Timeline of Data Collection and Political Events
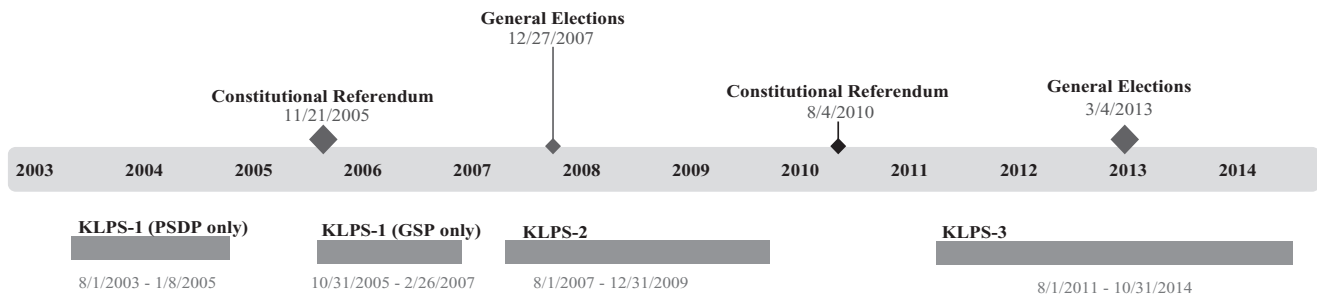
Note: KLPS denotes Kenya Life Panel Survey. GSP denotes Girls Scholarship Program. PSDP denotes Primary School Deworming Program.

this time period, Kenya held two general elections, in 2007 and 2013. Kenyans also voted in two constitutional referenda: a 2005 referendum in which voters rejected the proposed constitutional changes, and a 2010 referendum that led to the adoption of a new constitution.

KLPS-2 was conducted in two waves—one before and one after the violence surrounding the 2007 elections. Participants were assigned to each wave at random, creating representative subsamples. In our empirical analyses, we use survey-wave fixed effects to control for differences that may be driven by exposure to the post-election violence and other time-specific events.

Tracking rates in the KLPS are high, especially given the setting. This is due in particular to several highly skilled and experienced survey enumerators who were involved in all three rounds of data collection, as well as the spread of cell phone technology throughout Kenya (including very rural areas) since the first round of KLPS data collection. Tracking during each data collection round was performed in two phases, following the methodology of the well-known Moving to Opportunity study in the United States (Kling, Liebman, and Katz 2007; Orr et al. 2003). As a result, we report "effective tracking rates" here.[8] In particular, KLPS-1 (PSDP sample) achieved an effective tracking rate of 84.4%, KLPS-1 (GSP sample) achieved 84.0%, KLPS-2 achieved 82.5%,

KLPS-3 (PSDP sample) achieved 87.3%, and KLPS-3 (GSP sample) achieved 84.3%.[9,10]

Empirical Strategy and Measurement

As prespecified, the main regression model is

$$Y_{it} = \alpha + \beta Urban_{it} + X'_{it}\theta + \delta_i + \gamma_t + \varepsilon_{it}, \quad (1)$$

where Y_{it} is an outcome for individual i at time t; $Urban_{it}$ is an indicator variable that takes a value of 1 if the individual resides in an urban area (or Nairobi/Mombasa) at time t; γ_t are survey round and wave fixed effects to control for time period effects; and δ_i are individual fixed effects. X_{it} is a vector of time-varying individual controls, including age, an indicator for participation in a randomized vocational training voucher intervention that launched in 2008 (between KLPS-2 and KLPS-3), and treatment status in that program.[11] Because respondents may be less willing to express ethnic attitudes to members of other ethnic groups due to social desirability bias (Adida et al. 2016), we also control for co-ethnicity with the survey enumerator.[12] Regressions are weighted to maintain initial population proportions, in

program subsample, and two rounds for the scholarship program subsample.

[8]The effective tracking rate is calculated as a fraction of those found, or not found but searched for during intensive tracking, with weights adjusted appropriately; for more detail, see Baird, Hamory, and Miguel (2008) and Baird et al. (2016). All KLPS sample individuals were sought at the start of each data collection round, and those randomly chosen for inclusion in the "intensive tracking sample" varied by round. The effective tracking rate in the Moving to Opportunity study was 89%.

[9]There is a tracking rate for KLPS-1 because it was conducted several years after the nongovernmental programs that defined the KLPS sample were implemented.

[10]Tracking rates among fully female samples (like the GSP) are typically lower in this context, where women in this age group frequently move for marriage and informal employment opportunities.

[11]Note that all individuals in the overall KLPS sample participated in one of two additional evaluations (Hicks et al. 2016), as described earlier. However, as both of these interventions were completed prior to the first round of KLPS data collection, participation and treatment status do not vary over time in the analysis data set used here and are absorbed in the individual fixed effects.

[12]This control variable was not prespecified but is included to control for response bias. The results are unchanged if we remove this

order for the results to be interpreted as broadly representative of the sample of rural western Kenya youth from the original evaluations.[13] Error terms are clustered at the 1998/2001 primary school level (corresponding to the level of randomization for the earlier programs from which these KLPS respondents were drawn).

This analytical approach improves upon cross-sectional analysis on two dimensions. Crucially, the individual fixed effects control for all time-invariant differences between respondents, including those that are unobserved and may drive the decision to move to an urban area. This increases our confidence that selection bias into urban migration is not driving the results. In addition, this approach captures whether urban migration is associated with individual-level changes in outcomes, which provides a more precise test of theory.

To interpret β as a causal effect, we must invoke the standard panel data "parallel trends" assumption (Angrist and Pischke 2008). That is, we must consider the possibility that urban migration is confounded with individual-level time trends. For example, if urban migrants are trending toward becoming "less ethnic" before they leave rural areas, this would bias the estimates of urbanization's impact. Although we cannot completely rule this out with our data—trends before KLPS-1 are not measured—we provide two pieces of evidence that support the plausibility of a causal interpretation. First, we show that the importance of ethnic identity and trust are not significant individual-level predictors of subsequent urban migration. Urban migrants therefore look similar to rural residents on our key outcomes before they move. Second, we examine trends in ethnic identification and trust across the three KLPS rounds. As discussed below, this provides some evidence of parallel trends that precede the divergence between urban and rural residents that we estimate in the data.

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variable from the models. We also consider the possibility that response bias and coethnicity with enumerator effects may be more pronounced in urban areas because urban dwellers are more exposed to and aware of social norms against expressing "ethnic" attitudes. As a result, urban dwellers may be less willing than their rural counterparts to express ethnic attitudes to outgroup enumerators. We explore this possibility with analyses in which we interact the urban measures with the coethnicity with the enumerator indicator. The results are not consistent with the notion that urban respondents would be less willing than their rural counterparts to express negative attitudes toward other tribes—or less ethnic attitudes in general—when interviewed by a non-coethnic (Appendix F, SI p. 16).

[13]Appendix G (SI p. 17) presents the main results with weights that only account for attrition and the KLPS tracking design.

Another potential concern is that fixed effects estimates are driven by the subset of individuals observed to be living in both rural and urban areas at some point in the panel data set and are thus "local" effects for this subgroup of movers. This reliance on a subgroup for identification also implies that fixed effects estimates may be less precise than their cross-sectional analogues. Fortunately, as we show, a large proportion of the sample move between rural and urban areas, resulting in estimates that are both quite precise and representative of the sample.

In summary, although there are reasons to be cautious about a causal interpretation, the individual fixed effects analyses meaningfully improve upon cross-sectional approaches, putting us on firmer empirical footing when assessing the political consequences of urban migration.

Measurement

We employ two main measures of urban residence. First, following Hamory et al. (forthcoming), we use a survey-based measure to define an *urban resident.* KLPS-3 respondents are asked whether they live in a "town/city" or "rural area," and we consider the residence to be urban if they report living in a town/city. We use the town/city they specify to generate a list of urban areas. The list contains more than 15 towns/cities with populations ranging from about 30,000 to more than three million (Nairobi). Although KLPS rounds 1 and 2 did not share this same town/city versus rural area reporting dichotomy, we apply the list of towns generated using the KLPS-3 data to the other two rounds for consistency. Second, we analyze a measure that only considers *Nairobi and Mombasa*— the two major cities in Kenya—to be urban. In Appendix B (SI p. 4), we also present results for alternative approaches to coding the urban variable: all urban areas excluding the five largest cities (Nairobi, Mombasa, Kisumu, Nakuru, and Eldoret); all urban areas minus the two largest cities (Nairobi and Mombasa); and the five largest cities (Nairobi, Mombasa, Kisumu, Nakuru, and Eldoret).

We measure *ethnic identification* in two ways. Our main measure captures the *importance* of ethnic identity with a survey item that reads as follows: "Is your ethnic or tribal origin somewhat important, very important or not very important to your life?" We create a 3-point scale where 1 means "not very important," 2 means "somewhat important," and 3 "very important." This measure is available in all three KLPS rounds.

Second, we measure *the salience* of ethnic identity relative to other identities with the following open-ended question:[14]

> We have spoken to many people and they have all described themselves in different ways. Some people describe themselves in terms of their language, religion, race, gender, and others describe themselves in economic terms, such as working class, middle class, or a farmer. Besides being a Kenyan, which specific group do you feel you belong to first and foremost?

Enumerators coded responses into one of five categories: ethnicity/language, religion, class/occupation, gender, and other. We create a binary variable that takes a value of 1 if the response is in the ethnicity/language category, and 0 otherwise.

The salience survey item was only included in Wave 2 of KLPS-2 and in KLPS-3 (see Appendix A, SI p. 1). The sample is therefore limited to those who were randomly assigned into Wave 2 in round 2, and we can only analyze changes from rounds 2 to 3 in this subsample. We are therefore more cautious in drawing general conclusions from the results on this item.[15]

To measure *trust*, we use items capturing trust in "most people," coethnics, members of other tribes, members of the respondent's church/mosque, and members of other churches/mosques. The items are in a similar format: for example, "in general, can you trust members of your tribe?" Response options are yes (1) or no (0). We create a trust index[16] and analyze each item individually. These items were included in all three KLPS rounds.

We also create a broader set of outcome measures capturing political and civic participation, religiosity and religious identity, attitudes about democracy, political knowledge, and access to the media. Appendix A (SI p. 1) provides details on these measures. Where appropriate, we combine survey questions into indices (details in Appendix A). In all such instances, we present the results on the index and, in Appendix B (SI p. 4), present results on the individual components.[17] A study of the

impacts of the GSP analyzed some of these political outcomes using the KLPS-1 data (Friedman et al. 2015).

Descriptive Statistics

Table 1 presents descriptive statistics. Thirty-five percent of the sample lived in an urban area when surveyed. This percentage increases from 32% in KLPS-1 to 38% in KLPS-3. About 15% were living in Nairobi or Mombasa. Only 5% lived in one of these major cities in KLPS-1, reflecting the baseline sampling from rural schools. This proportion increases to 14% in KLPS-2 and 25% by KLPS-3. On average, our respondents lived in urban areas for 3.5 years, a figure that increases from 2 years in KLPS-1 to almost 5 years by KLPS-3. In total, 49% of the sample is observed living in both rural and urban areas in the panel data set (23% using the Nairobi/Mombasa definition); the fixed effects estimates are generated among these movers, who thus compose a sizable portion of our data set.

The importance of ethnic identity is high in the sample, with an average of 2.85 (scale from 1 to 3). This figure starts at 2.79, moves up to 2.92 in KLPS-2, and then shifts down slightly to 2.86 in KLPS-3. About 38% report that ethnicity is the identity category that they most identify with, a figure that starts off quite high (53% in KLPS-2 Wave 2) and drops to 31% in KLPS-3. General levels of trust in this sample diminished over the study time period. Trust in other ethnic groups is relatively low; about 23% agree that most people from other tribes can be trusted. This figure is lowest in KLPS-2 (21%), which was conducted around the 2007 elections. Finally, trust in coethnics diminished over the study period. In KLPS-1, 75% agreed that most members of their own tribe could be trusted. This drops to 52% in KLPS-2 and 40% in KLPS-3.

Results
Predictors of Migration to an Urban Area

We first present results on the predictors of migration to an urban area (Table 2). The dependent variable is

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[14]This item is included in early rounds of the Afrobarometer surveys and was analyzed in Eifert, Miguel, and Posner (2010).

[15]This item was not included in our preanalysis plan.

[16]We construct an index to help draw general conclusions within a given domain, avoid cherry-picking subindicators, and increase statistical power; see Kling, Liebman, and Katz (2007).

[17]In the main tables, we report the sample that is consistent across the entire index for the subcomponents. To construct indices, we employ the following procedure: (a) for each subquestion in a

family of variables, first align answers so that higher numbers always have a consistent meaning (i.e., "good" or "bad"); (b) calculate the mean and standard deviation of responses to each subquestion among those who live in rural areas (pooling rural observations across all rounds); (c) create normalized variables that have the rural mean subtracted off and are divided by the rural standard deviation; and (d) calculate the raw mean of the normalized variables across all subquestions.

TABLE 1 Summary Statistics on Urbanization, Ethnicity, and Trust

Outcome	Observations	Mean	Standard Deviations
Residence in urban area[a]	19,259	0.353	0.478
KLPS-1	7,040	0.316	0.465
KLPS-2 (PSDP)	5,050	0.360	0.480
KLPS-3	7,169	0.384	0.486
"Mover"[b]	6,936	0.490	0.500
Residence in Nairobi/Mombasa	19,259	0.146	0.353
KLPS-1	7,040	0.049	0.215
KLPS-2 (PSDP)	5,050	0.139	0.345
KLPS-3	7,169	0.251	0.433
"Mover"	6,936	0.232	0.422
Cumulative time spent in urban area (in years)	19,195	3.538	3.961
KLPS-1	7,040	2.109	2.834
KLPS-2 (PSDP)	5,013	3.622	3.758
KLPS-3	7,142	4.931	4.564
Importance of ethnic identity	19,090	2.853	0.416
KLPS-1	7,050	2.789	0.460
KLPS-2 (PSDP)	4,788	2.917	0.302
KLPS-3	7,252	2.864	0.439
Ethnic identity most important	9,835	0.376	0.484
KLPS-1	—	—	—
KLPS-2 (PSDP Wave 2 only)	2,589	0.532	0.499
KLPS-3	7,246	0.308	0.462
Trust index	19,357	−0.026	0.706
KLPS-1	7,052	0.165	0.673
KLPS-2 (PSDP)	5,072	−0.099	0.707
KLPS-3	7,233	−0.157	0.696
Trust in other ethnic groups	19,357	0.233	0.423
KLPS-1	7,052	0.230	0.421
KLPS-2 (PSDP)	5,072	0.207	0.405
KLPS-3	7,233	0.257	0.437
Trust in own ethnic group	19,357	0.559	0.497
KLPS-1	7,052	0.747	0.435
KLPS-2 (PSDP)	5,072	0.520	0.500
KLPS-3	7,233	0.400	0.490

Note: See Table A1 (SI p. 1) for outcome construction. Means and standard deviations are weighted to maintain initial population proportions. [a]The primary measure of "urban" used throughout our analysis is self-defined in the survey by the respondent, and it includes residence in cities and large towns in Kenya. [b]"Mover" is defined as a respondent who was surveyed in a rural area during at least one survey round, and an urban area in at least one other survey round.

the binary measure of urban residence, or residence in Nairobi/Mombasa, and the independent variables are lagged. Results indicate how individual characteristics measured in a survey round predict residence in an urban area in the next survey round.[18] This analysis provides information about how the sample of urban migrators is similar or different on premigration characteristics.

Importantly, levels of ethnic identification and trust do not predict migration to an urban area. The most robust result is that those with more education are more likely to migrate. Each year of education attained increases the probability of urban migration by about 3–4 percentage points; thus, those who complete primary schooling (8 years) are about 12–16 percentage points

[18]Appendix C (SI p. 12) presents the same analyses, restricting the sample to be the same in all columns. The results are comparable to those in Table 2.

TABLE 2 Predictors of Urbanization

	Urban			Nairobi/Mombasa		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Female	0.002	−0.021	−0.020	−0.013	−0.037*	−0.066
	(0.015)	(0.021)	(0.038)	(0.014)	(0.015)	(0.036)
Ethnically Luo	0.095	0.148*	−0.100	0.014	0.055	−0.115*
	(0.058)	(0.068)	(0.116)	(0.046)	(0.070)	(0.057)
Ethnically Teso	−0.091	−0.215**	−0.394**	−0.055	−0.161**	−0.271**
	(0.057)	(0.066)	(0.076)	(0.042)	(0.026)	(0.074)
Non-Luhya, non-Luo, non-Teso	0.132	0.073	−0.128	0.052	−0.011	0.016
	(0.079)	(0.097)	(0.097)	(0.072)	(0.077)	(0.110)
Age (lagged)	0.009**	−0.003	−0.009	0.008**	−0.006	−0.018**
	(0.003)	(0.005)	(0.010)	(0.003)	(0.003)	(0.006)
Years education attained (lagged)	0.046**	0.038**	0.043**	0.031**	0.032**	0.032**
	(0.004)	(0.007)	(0.010)	(0.003)	(0.005)	(0.009)
Married at survey (lagged)	−0.031	−0.031	−0.026	−0.046**	−0.018	−0.047
	(0.023)	(0.026)	(0.044)	(0.016)	(0.017)	(0.031)
Number of children at survey (lagged)	−0.055**	−0.038*	−0.025	−0.028**	0.000	0.015
	(0.010)	(0.016)	(0.019)	(0.010)	(0.012)	(0.015)
Household farmed in last 12 months (lagged)		−0.085	0.477**		0.105*	0.326**
		(0.163)	(0.053)		(0.050)	(0.044)
Had a job or business at survey (lagged)		−0.092	−0.201		−0.109	−0.305*
		(0.076)	(0.139)		(0.070)	(0.122)
Worked in agriculture at survey (lagged)		0.026	0.124		0.047	0.199
		(0.073)	(0.149)		(0.068)	(0.126)
Worked in retail at survey (lagged)		0.049	0.221		0.076	0.258
		(0.068)	(0.162)		(0.068)	(0.159)
Worked in unskilled at survey (lagged)		0.105	0.153		0.095	0.144
		(0.085)	(0.138)		(0.076)	(0.119)
Worked in skilled at survey (lagged)		0.157	0.026		0.114	0.118
		(0.091)	(0.148)		(0.094)	(0.127)
Worked in professional at survey (lagged)		0.053	0.138		0.048	0.139
		(0.114)	(0.167)		(0.107)	(0.134)
Worked in other at survey (lagged)		−0.032	0.311		0.156	0.512
		(0.194)	(0.407)		(0.191)	(0.385)
Crop destruction in last 12 months (lagged)		−0.020	−0.012		−0.021	0.005
		(0.018)	(0.033)		(0.014)	(0.026)
Household displaced in last 12 months (lagged)		−0.041	0.024		0.003	0.083
		(0.064)	(0.099)		(0.041)	(0.106)
1998 standardized test score		−0.008	0.032		0.001	0.029
		(0.011)	(0.019)		(0.007)	(0.016)
Importance of ethnic and tribal origin (lagged)			0.000			0.008
			(0.023)			(0.018)

(Continued)

TABLE 2 (Continued)

	Urban			Nairobi/Mombasa		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Trust index (lagged)			0.009			−0.001
			(0.024)			(0.018)
Democratic attitudes index (lagged)			0.010			−0.027
			(0.026)			(0.023)
Voted previous national election (lagged)			−0.045			−0.015
			(0.032)			(0.030)
Survey round and wave fixed effects	Yes	Yes	No	Yes	Yes	No
Observations	8,112	3,621	989	8,112	3,621	989

Note: This table displays results of cross-sectional regressions, using the PSDP sample only. Additional controls include indicators for assignment to PSDP treatment group, participation in the Vocational Training Voucher Program (lagged), and assignment to the vocational training voucher treatment group (lagged). All regressions are weighted to maintain initial population proportions, and standard errors are clustered by baseline primary school. Columns 1, 2, 4, and 5 contain the sample from KLPS rounds 2 and 3, and columns 3 and 6 contain the sample from KLPS round 3 only (thus, survey round fixed effects are not needed for the latter). Columns 2 and 5 contain a 1998 standardized test score measure, which was only available for a subset of the baseline sample and thus greatly reduces sample size in comparison to the previous column.
$^*p < .05, ^{**}p < .01.$

more likely to migrate than are those with only 4 years of schooling. Those with more children in their household are less likely to migrate. Women and those who are married also appear less likely to migrate, although these results are not robust across models. There is also suggestive evidence that those who have a job or own a business are less likely to move, whereas those who are engaged in farming are more likely to move.

We also examine how political attitudes and behaviors predict urban migration (columns 3 and 6). Democratic attitudes do not predict urban migration. Voting in the previous election is negatively correlated with a future move to a city, although this association is not statistically significant.

Urban Migration's Impact on Ethnic Identification and Trust

We now turn to ethnic identification and trust (Table 3). In each analysis, we compare the fixed effects estimates to cross-sectional estimates using the same data set.[19] Row 1 presents results on the importance of ethnic identity (standardized). Migration to urban areas significantly reduces the importance individuals attach to their ethnic or tribal origin (p < .05). The effect size is not trivial given the salience of ethnicity in Kenya: about 0.09 standard de-

viations (column 3). The coefficient's magnitude doubles when we focus on migration to Nairobi and Mombasa: The effect is about 0.19 standard deviations (column 4, p < .01). The negative effect of urban residence grows larger with every year that the respondent resides in an urban area (p < .01). For instance, the effect size among those who spent 7.5 years in an urban area (one standard deviation above the mean) is about 0.30 standard deviations. This is equivalent to a reduction in the stated importance of ethnic or tribal origin from 2.86 (the mean among those in rural areas) to 2.75.[20]

To further investigate these results, Figure 2 presents the unadjusted means of the importance of ethnic identity variable (standardized) by survey round for four different groups of respondents (using the general urban measure). Panel A compares trends among those who lived in rural areas in all three rounds (circles) to those who were rural in round 1 but urban in rounds 2 and 3 (triangles). Both groups were at the same level in round 1. Both trend upward from round 1 to round 2, likely because the 2007 election heightened the importance of ethnicity for all respondents. Then, from round 2 to round 3, these groups diverge considerably, with the importance of ethnic identity declining significantly in the urban group. Panel B compares trends in the always rural sample to those who were rural in round 1, urban in round 2, but then rural in round 3 (diamonds). The

[19]We also conduct tests to determine whether the fixed effects estimates are statistically different from the cross-sectional estimates. In most but not all cases, we cannot reject equality.

[20]For comparison, Appendix F (SI p. 18) presents cross-sectional results using Kenyan Afrobarometer data.

TABLE 3 Results for Ethnicity, Religion, and Trust

	Cross-Sectional Regressions			Fixed Effect Regressions				
	Urban	Nairobi/ Mombasa	Obs.	Urban	Nairobi/ Mombasa	Total Years Urban[a]	Rural Mean (s.d.)[b]	Individuals[c]
	(1)	(2)		(3)	(4)	(5)		
Importance of ethnic and tribal origin (normalized)	−0.067** (0.024)	−0.111** (0.035)	18,038	−0.090* (0.039)	−0.191** (0.068)	−0.040** (0.010)	0.002 0.997	8,922
Language/ethnicity most important in self-identification	0.027* (0.013)	0.016 (0.016)	8,856	0.069 (0.062)	0.096 (0.107)	0.013 (0.022)	0.382 0.486	7,591
Religious identification index	−0.078** (0.019)	−0.116** (0.021)	8,473	−0.069 (0.118)	−0.032 (0.116)	−0.026 (0.029)	0.009 0.588	7,437
Importance of religion (normalized)	−0.029 (0.029)	−0.046 (0.033)	8,473	−0.088 (0.165)	−0.133 (0.155)	−0.040 (0.052)	0.038 0.906	7,437
Increased religiosity over previous 12 months	0.052** (0.014)	0.015 (0.017)	8,473	0.068 (0.082)	0.057 (0.087)	0.009 (0.021)	0.292 0.455	7,437
Trust Index	−0.021 (0.016)	−0.057** (0.019)	18,283	−0.020 (0.022)	−0.077* (0.035)	−0.006 (0.008)	0.000 0.706	8,920
Believes most people can be trusted	−0.001 (0.007)	−0.003 (0.009)	18,283	−0.010 (0.009)	−0.005 (0.016)	−0.000 (0.003)	0.101 0.302	8,920
Trusts members of own tribe	−0.003 (0.012)	−0.020 (0.013)	18,283	−0.005 (0.018)	−0.024 (0.026)	−0.005 (0.005)	0.577 0.494	8,920
Trusts members of other tribes	−0.007 (0.010)	−0.025* (0.012)	18,283	−0.004 (0.013)	−0.044* (0.021)	−0.002 (0.004)	0.237 0.426	8,920
Trusts members of own church/mosque	−0.019* (0.009)	−0.041** (0.014)	18,283	−0.014 (0.016)	−0.069** (0.026)	−0.006 (0.005)	0.685 0.464	8,920
Trusts members of other churches/mosques	−0.018 (0.010)	−0.043** (0.014)	18,283	−0.008 (0.019)	−0.034 (0.023)	−0.001 (0.005)	0.350 0.477	8,920

Note: Columns 1–2 present the results of cross-sectional regressions, and columns 3–5 present the results of fixed effect regressions, of the outcome measure (left-hand column) on a measure of urban location at time of survey, age, education level, and indicators for female, participated in the PSDP, was assigned to the first or second treatment group in that program, was assigned to treatment in the GSP, participated in the Vocational Training Voucher Program, was assigned to the voucher treatment in that program, respondent is a coethnic of survey enumerator, and a full set of indicators for KLPS survey round and wave. Outcome measures are constructed as described in Table A1 (SI p. 1), with any normalizations performed among the rural sample (as defined by "urban," our primary measure of urban residence). Regressions are weighted to maintain initial population proportions, and standard errors are clustered by baseline primary school.
[a]Total years urban is a measure of cumulative time spent in urban areas (not necessarily consecutively). [b]The control group mean is calculated among the full sample of individuals who are living in a rural area at the time of survey administration (according to our primary measure of urban location). It is not restricted to the fixed effects regression sample, which is why values presented are not mean 0, standard deviation 1. [c]Number of individuals reported is for columns 3 and 4; the number of observations in column 5 is slightly smaller in a small number of cases.
*p < .05, **p < .01.

patterns from round 1 to round 2 are very similar to those observed in the left panel: Both groups show increases during this period. However, the trend from round 2 to round 3 differs substantially from Panel A, as those who

lived in urban areas in round 2 but rural areas in round 3 converge with the always rural sample. Panel C compares the always rural group to those who were rural in rounds 1 and 2 but urban in round 3 (squares). Those

FIGURE 2   The Importance of Ethnic Identity, by Survey Round and Urban/Rural Location (General Urban Coding)
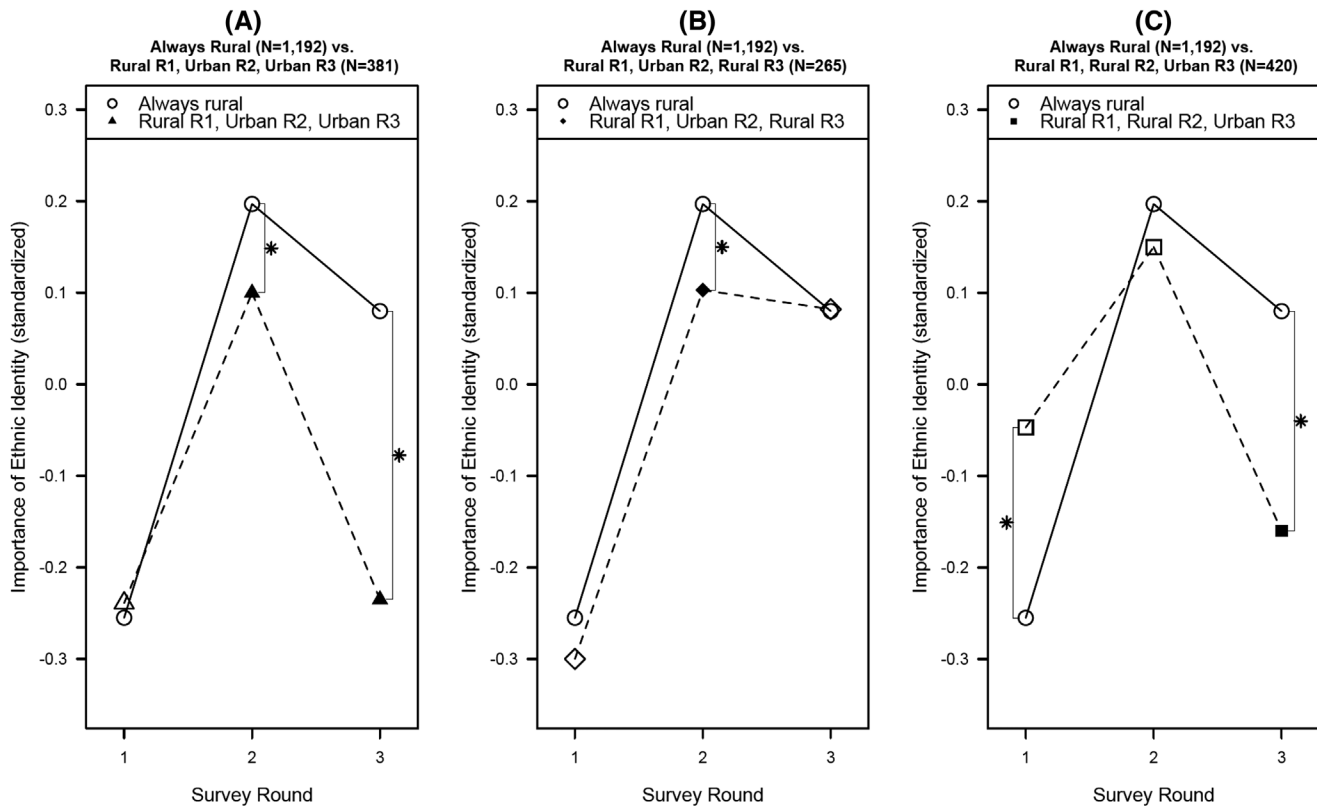
Note: Figure displays weighted means of the standardized importance of ethnic identity variable by survey round for four groups of respondents: (1) always rural (Panels A, B, C); (2) rural round 1, urban round 2, urban round 3 (Panel A); (3) rural round 1, urban round 2, rural round 3 (Panel B); (4) rural round 1, rural round 2, urban round 3 (Panel C). Symbols that are filled in (hollow) indicate that individuals in that subsample lived in urban (rural) areas in that survey round.

∗Indicates that the difference in (weighted) means between the rural and urban sample in a given survey round is statistically significant at p < .05.

who eventually move to an urban area start out with a somewhat higher attachment to their ethnicity in round 1. The groups trend upward and begin to converge in round 2. In round 3, the groups diverge, and the urban population attaches significantly lower levels of importance to their ethnic identity.

These patterns bolster the evidence that urban migration reduced the importance of ethnic identity. They also allow us to examine the parallel trends assumption required for a causal interpretation. Although we cannot observe trends before round 1, all four groups were trending similarly from round 1 to round 2. The trends are especially comparable when we focus on the left and center panels, where all three groups trend similarly from almost identical starting points in round 1. The divergence between urban and rural residents emerges in round 3. The figure thus provides some evidence to support a causal interpretation of the estimates.

Although urban migration reduced the absolute importance of ethnicity, there is no evidence that it altered the salience of ethnicity relative to other identities (Table 3, row 2). We note again, however, that this analysis draws upon a limited subsample.[21] In addition, while cross-sectional analyses suggest that urban migration is associated with a reduction in religiosity, this result is not robust to the inclusion of individual fixed effects.

The remainder of Table 3 presents results for trust. Residence in any urban area has no significant impact on the trust index or on any of its components. Ethnic identity does not appear to become less important simply because trust in other groups increases.

Migration to Nairobi/Mombasa did, however, significantly reduce generalized trust, as captured by the trust

[21]The number of observations reported is at the respondent-round level. Data for this outcome are only available for half of the KLPS-2 sample.

FIGURE 3 Trust Index, by Survey Round and Urban/Rural Location (Nairobi/Mombasa Coding)
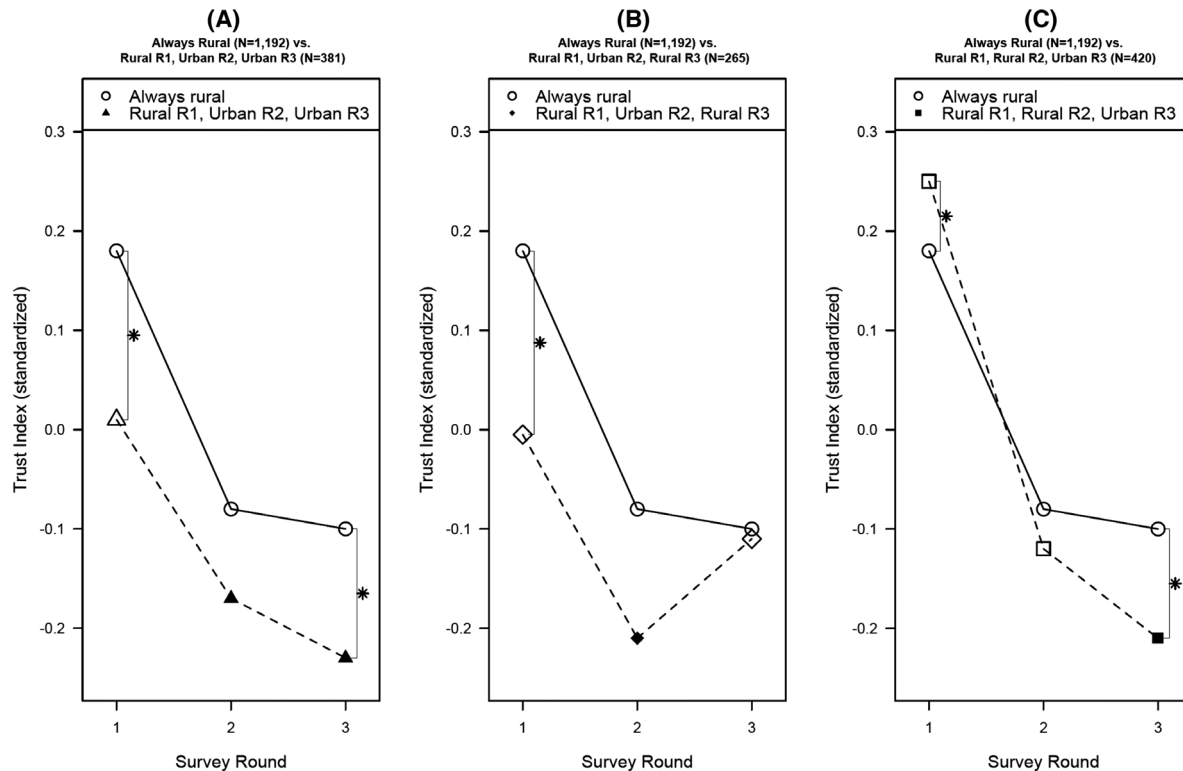

Note: Figure displays weighted means of the standardized trust index. See notes on Figure 2 for a detailed description.

index. Notably, migration to Nairobi or Mombasa had a negative and significant impact on trust in other ethnic groups, evidence that the experience of living in these major cities decreased trust in outgroup members. Migration to Nairobi or Mombasa also significantly reduced trust in members of respondents' own church or mosque, which likely reflects respondents' experiences with entering new religious communities upon arrival in urban areas. Urban migration also had a negative effect on trust in members of respondents' own ethnic group. This effect is not statistically significant, and the estimate is about half the magnitude of the effect on trust in members of other ethnic groups. However, postestimation tests show that these effect estimates are not statistically significantly different from one another. Therefore, while we can conclude that urban migration did have a negative impact on trust in other groups, the postestimation tests combined with the results on the trust index lead us to be cautious about also concluding that urban migration had a larger effect on trust in outgroup members than it did on trust in ingroup members, or on social trust more generally. These results thus appear to be consistent with Putnam (2007), which suggests that urban migration may, in the

short term, reduce trust in both ingroup and outgroup members.

To examine the trust results in more depth, Figure 3 presents the unadjusted means of the trust index by survey round among the four groups introduced in Figure 2. The patterns are similar to those in Figure 2. In Panels A and B, the always rural group is more trusting than the groups that eventually move to an urban area. All three groups trend down at about the same rate from round 1 to round 2, perhaps because of the 2007 elections. Notably, those who remain in the urban areas in round 3 continue trending down in their trust (triangles in Panel A), whereas those in the always rural sample and those who return to rural areas in round 3 (diamonds in Panel B) remain stable from round 2 to round 3. In Panel C, both groups start from about the same position and trend down similarly in round 2. While the always rural group remains about the same in round 3, the group that moves to an urban area continues to show reductions in trust. These patterns strengthen the causal evidence that urban migration reduces trust, though some caution is still required.

FIGURE 4 Trust in Other Ethnic Groups, by Survey Round and Urban/Rural Location (Nairobi/Mombasa Coding)
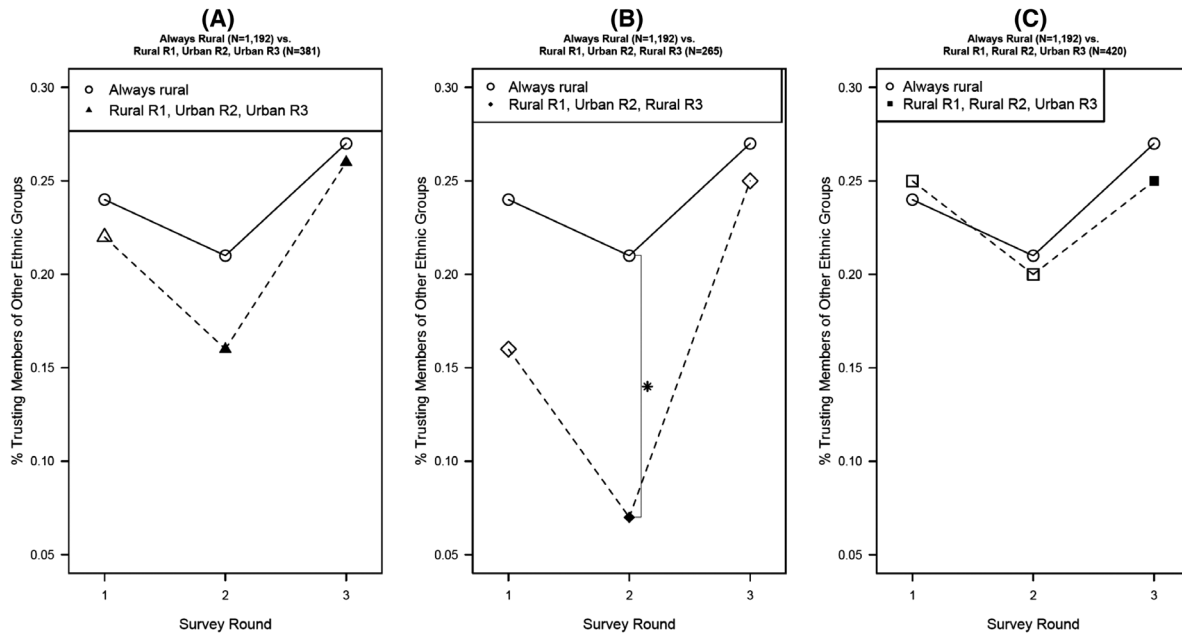
Note: Figure displays percentage of people who trust members of other ethnic groups. See notes on Figure 2 for a detailed description.

In Figure 4, we illustrate the proportion of each group that believes most members of *other* ethnic groups can be trusted. Although all groups show downward trends from round 1 to round 2, the reductions in trust of non-coethnics are most pronounced among those living in urban areas during round 2 (Panels A and B). This suggests that the negative impact of urban migration on trust in outgroup members appears to be mainly driven by round 2. Since round 2 was conducted in close temporal proximity to the intensely contested and ethnically charged 2007 elections, this pattern appears to corroborate second-generation expectations: that urban migration makes ethnic differences more relevant in contexts of high political competition. Consistent with this notion, the events leading up to and following the 2007 elections had a greater impact on urban residents' trust in other tribes than they did on rural residents.

One might be concerned that the results are mainly driven by the contentious 2007 elections and the post-election violence that followed, especially since much—though not all—of the violence occurred in urban areas. However, the results are robust when we exclude the data collection wave that occurred in 2007 and early 2008 (Appendix E, SI p. 15).

As prespecified, we examine robustness with a multiple-comparisons adjustment. Across the outcome indices analyzed in Tables 3 and 6, we compute false discovery rate (FDR) adjusted q-values that limit the expected proportion of rejections within a set of hypotheses that are Type I errors. These results are presented in Appendix D (SI p. 14). The main results on ethnic identification and trust are largely robust to this adjustment, with some reductions in statistical significance that do not substantively alter the broad interpretation.

Heterogeneity

Table 4 presents results of heterogeneity analyses for the importance of ethnicity outcome. We first analyze interactions between urban residence and age, gender, and socioeconomic status (SES), the three interactions that were prespecified. Since SES may be endogenous to urban migration, we use parents' education as a proxy. Overall, urban migration appears to reduce the importance of ethnic identity for everyone, though there is evidence that the effect is larger for older respondents and, in the case of Nairobi and Mombasa, people whose parents had higher levels of education. In the final columns, we also include interactions with the respondent's own education and sector of employment and find no significant interactions. Table 5 presents the same results on

TABLE 4 Results for Importance of Ethnicity—Heterogeneity

	Urban			Nairobi/Mombasa		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Urban residence	−0.135*	−0.138*	−0.135	−0.227	−0.210	−0.155
	(0.068)	(0.068)	(0.079)	(0.115)	(0.115)	(0.144)
Urban × Female	0.081	0.090	0.092	0.143	0.159	0.128
	(0.084)	(0.085)	(0.087)	(0.130)	(0.134)	(0.146)
Urban × Age (demeaned)	−0.015*	−0.015*	−0.010	−0.014	−0.015	−0.012
	(0.007)	(0.007)	(0.009)	(0.016)	(0.016)	(0.019)
Urban × Parent education (demeaned)		−0.018	−0.014		−0.041*	−0.036*
		(0.012)	(0.012)		(0.017)	(0.016)
Urban × Indicator for works in agriculture			0.134			−0.849
			(0.187)			(0.943)
Urban × Indicator for works in retail			0.105			0.162
			(0.095)			(0.153)
Urban × Indicator for works in unskilled trade			0.093			−0.016
			(0.136)			(0.178)
Urban × Indicator for works in skilled trade			−0.070			−0.026
			(0.165)			(0.207)
Urban × Indicator for works in professional			−0.432			−0.441
			(0.224)			(0.274)
Urban × Indicator for works in other			0.760			0.737
			(0.673)			(0.651)
P−value on joint test of urban* Employment sector			0.236			0.352
Survey round and wave fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Individual fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of individuals (fixed effects)	8,922	8,709	8,644	8,922	8,709	8,644

Note: Columns 1–6 present results of fixed effect regressions of the outcome measure on a measure of urban location at the time of survey and all terms included in the interactions, as well as indicators for participated in the Vocational Training Voucher Program, was assigned to the voucher treatment in that program, respondent is a coethnic of the survey enumerator, and KLPS survey round and wave. The outcome measure is "importance of ethnic and tribal origin" and is constructed as described in Table A1 (SI p. 1). All regressions are weighted to maintain initial population proportions, and standard errors are clustered by the baseline primary school.
$^*p < .05$, $^{**}p < .01$.

trust. Once again, we do not find strong evidence of heterogeneous effects. Together, these results provide evidence that the effects we identify generalize to a broad range of people and are not being driven by particular subgroups.

Impacts on Other Outcomes

Although our focus has been on the impact of urban migration on ethnic identification and trust, other related literatures make predictions about the impact of urbanization on other political outcomes. We conclude by presenting estimates of urban migration's impact on political and civic participation, democratic attitudes, political knowledge, and media consumption (Table 6).

We find no evidence of an impact of rural–urban migration on voter turnout.[22] We also find no evidence that urban migration has an impact on a political participation index or any of its components. For example, there is no effect of urban migration on the likelihood of attending protests or demonstrations or on having political discussions with friends and family (Appendix B, SI p. 4); that said, the political participation effects are relatively

[22]We include the 2005 and 2010 constitutional referenda as national elections.

TABLE 5 Results for Trust Index—Heterogeneity

	Urban			Nairobi/Mombasa		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Urban residence	−0.055	−0.051	−0.084	−0.091	−0.076	−0.080
	(0.031)	(0.030)	(0.043)	(0.054)	(0.055)	(0.064)
Urban × Female	0.063	0.057	0.094	0.031	0.027	0.028
	(0.045)	(0.045)	(0.052)	(0.073)	(0.072)	(0.078)
Urban × Age (demeaned)	−0.014*	−0.014*	−0.016*	−0.000	−0.002	−0.004
	(0.007)	(0.007)	(0.008)	(0.008)	(0.009)	(0.011)
Urban × Parent education (demeaned)		−0.005	−0.004		−0.007	−0.004
		(0.008)	(0.009)		(0.011)	(0.011)
Urban × Indicator for works in agriculture			0.115			−0.050
			(0.099)			(0.289)
Urban × Indicator for works in retail			−0.022			−0.003
			(0.067)			(0.079)
Urban × Indicator for works in unskilled trade			0.075			0.028
			(0.087)			(0.122)
Urban × Indicator for works in skilled trade			0.115			0.068
			(0.115)			(0.100)
Urban × Indicator for works in professional			−0.034			−0.120
			(0.116)			(0.113)
Urban × Indicator for works in other			0.035			−0.183
			(0.574)			(0.416)
P-value on joint test of urban* Employment sector			0.681			0.886
Survey round and wave fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Individual fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of individuals (fixed effects)	8,920	8,708	8,642	8,920	8,708	8,642

Notes: Columns 1–6 present the results of fixed effect regressions of the outcome measure on a measure of urban location at the time of survey and all terms included in the interactions, as well as indicators for participated in the Vocational Training Voucher Program, was assigned to the voucher treatment in that program, respondent is a coethnic of the survey enumerator, and KLPS survey round and wave. The outcome measure is "trust index" and is constructed as described in Table A1 (SI p. 1). All regressions are weighted to maintain initial population proportions, and standard errors are clustered by the baseline primary school.
*p < .05, **p < .01.

imprecisely estimated compared to other outcomes. By contrast, migration to urban areas does significantly reduce civic participation, an effect that is especially large for Nairobi/Mombasa residents. These effects are driven by three components of the index: membership in bible study groups, school committees or groups, and sports teams.

There is no evidence that migration to an urban area increases pro-democracy attitudes or influences attitudes about political violence. We also examine satisfaction with authority, economics and politics, political efficacy, and attitudes about political authority and find that urbanization has no effect on these attitudes.

Urban migration does, however, lead to substantial and significant increases in political knowledge and media consumption, and these are particularly large for migration to Nairobi/Mombasa.

Conclusion

This article provides new evidence on the impact of rural-to-urban migration on ethnic identification and trust, relationships about which two important bodies of literature offer competing expectations. We also present results on urbanization's impact on a range of other

TABLE 6 Results for Participation, Attitudes, Knowledge, and Information Consumption

	Cross-Sectional Regressions			Fixed Effect Regressions			
	Urban	Nairobi/ Mombasa	Obs.	Urban	Nairobi/ Mombasa	Rural Mean (s.d.)	Indi- viduals
	(1)	(2)		(3)	(4)		
Voted in previous national election, among voting age[a]	−0.016 (0.013)	−0.022 (0.016)	10703	0.012 (0.032)	0.027 (0.043)	0.467 0.499	7,800
Political Participation Index	−0.038* (0.017)	−0.049* (0.020)	8,868	−0.108 (0.093)	−0.111 (0.126)	−0.003 0.719	7,600
Civic Participation Index	−0.066** (0.013)	−0.175** (0.018)	10,169	−0.082* (0.038)	−0.211** (0.059)	−0.000 0.488	6,198
Democratic Attitudes Index	0.031 (0.017)	0.024 (0.022)	10,643	0.000 (0.053)	−0.010 (0.071)	0.011 0.595	8,015
Agrees "It is sometimes necessary to use violence in support of a just cause"	−0.027** (0.009)	−0.034** (0.012)	13,149	−0.028 (0.020)	−0.059 (0.030)	0.230 0.421	8,471
Satisfaction with Kenya Index	−0.033 (0.024)	−0.043 (0.029)	10,573	−0.013 (0.052)	−0.003 (0.069)	−0.171 0.676	7,990
(Strongly) agrees should question leaders	0.051** (0.010)	0.067** (0.014)	13,149	0.016 (0.027)	0.057 (0.035)	0.604 0.489	8,471
Political Efficacy Index	0.010 (0.020)	−0.022 (0.020)	10,683	0.017 (0.069)	−0.032 (0.091)	−0.007 0.699	8,023
Media Consumption Index	0.191** (0.018)	0.345** (0.030)	15,808	0.163** (0.026)	0.304** (0.041)	−0.014 0.668	8,784
Political knowledge	0.064** (0.006)	0.084** (0.007)	15,726	0.036** (0.009)	0.056** (0.012)	0.602 0.279	8,684

Note: See Table 3 notes for general notes.
[a] For the regressions of voted in previous election, urban location is defined at the time of the election, rather than at the time of the survey. For individuals interviewed in KLPS-1 in 2007 prior to the 2007 election, the outcome is defined as "indicator for intended to vote in the 2007 presidential election" rather than "voted in the 2002 referendum."

key political outcomes, including political participation, democratic attitudes, and political knowledge. Importantly, the evidence is based on analyses of panel data that allow us to control for individual fixed effects and to track how individuals change over time as they migrate to and from urban areas. We are therefore on firmer ground interpreting our results causally.

A central finding is that urban migration significantly reduced the importance individuals attach to their ethnic identity. This effect, which corroborates first-generation modernization theory, was largest among migrants to major cities and those who reside in urban areas for longer periods of time. However, another central result is that rural-to-urban migration significantly reduced social trust. Urban migrants became signifi-

cantly less trusting of members of other ethnic groups, especially in a period of intense electoral competition and in major cities, a finding that is more consistent with second-generation modernization expectations. In short, urban migrants became less attached to their own ethnic identity, but less trusting of members of other groups, and other people in general.

These findings suggest several areas where additional research would be fruitful. One concerns generalizability. The three-wave panel data that we analyze are unusual and permit a research design with a high degree of internal validity. However, the data include individuals sampled (at baseline) from one district in one country, which constrains our ability to make confident generalizations. Second, as noted, a limitation of the fixed

effects approach is that it does not allow us to estimate our key relationships among nonmovers. Given the existing empirical literature, we believe this cost is worth the increased internal validity that our research strategy affords. Furthermore, the historical and contemporary role of ethnicity in Kenya's political, economic, and social spheres make it a "least likely" case in which to discover individual-level changes in ethnic attitudes. If urban migration can reduce the importance of ethnic identity in Kenya, we expect it would also do so in other contexts where ethnic identification is less deep-rooted and ethnicity is less politicized, though future research should conduct similar analyses in other environments.

The composition of our sample, which is mainly ethnic Luhya, also raises the question of generalizability to other ethnic populations. As noted, the Luhya are a relatively large and politically relevant ethnic group that have not had an ethnic leader serve as the president or as a major presidential contender, though Luhya elites have been important in coalitions that have sought the presidency. The Luhya also historically exhibit less ethnic bloc voting than other groups. This raises the possibility that urban Luhya are less subject to ethnic-based mobilization than are members of groups such as the Kikuyu or Luo, who have had coethnics contesting the presidency in recent elections. On the one hand, this could imply that our results on ethnic identification would be weaker among Kikuyu or Luo, though we would expect them to extend to the other roughly 40 ethnic groups in Kenya (and to other similar groups elsewhere). On the other hand, it could also imply that the results on ethnic-based trust could be even stronger among these groups subject to more intense ethnic-based mobilization in urban areas.

This said, Luhya (and other similar groups) in urban areas have not been completely exempt from exposure to ethnic-based mobilization. Because Luhya are geographically concentrated in certain neighborhoods in Nairobi, they have historically been a politically relevant group in city politics and make up a large proportion of the population in a number of the city's electoral constituencies—single-member districts from which Members of Parliament (MPs) are elected. Luhya politicians have often represented these constituencies and mobilized along ethnic lines in these legislative elections. In addition, politicians with national-level political aspirations often visit these areas with Luhya elites in the hopes of securing the Luhya vote. Therefore, although ethnic-based mobilization during presidential elections may be less intense among the Luhya and similar groups, they are not removed from potential exposure to ethnic mobilization. For this reason, our results may extend more generally to politically relevant ethnic populations. However, it will be important

for future research to study more directly how the political characteristics of ethnic groups condition the impact of rural-to-urban migration on ethnic attitudes.

Future research could also examine in more depth the mechanisms driving the relationships that we identify. As we note, migration to urban areas could impact ethnic attitudes because life in the urban areas weakens the importance of ethnic bonds (a "modernization" mechanism) or because of increased contact and interactions with members of other groups (a "contact" mechanism). Consistent with a contact mechanism, our results on ethnic identification are stronger for migrants to the larger cities, contexts where migrants would be more likely to interact with members of other ethnic groups. However, trust in members of other ethnic groups also goes down as a result of migration to the major cities, which suggests that mechanisms beyond intergroup contact may be driving the ethnic identification results.

Future research could also examine why urban migration reduced ethnic identification but did not increase the salience of class or other non-ethnic identities, as might be expected by the literature. One possibility is that ethnic identification is relatively easier to shift in the shorter term, whereas it takes longer for newer identity categories to emerge and become more salient. Relatedly, future research could investigate why urban migration simultaneously reduces ethnic identification and interethnic trust. Regarding the latter, our findings provide speculative evidence about the role of the political context (Thachil 2017). The evidence suggests that urban residence had the largest negative impact on trust in members of other tribes in the time period surrounding the 2007 elections (Figure 4), a period of heightened competition between groups. It also suggests that the negative impact of urban residence on ethnic identification was largely driven by changes that occurred in KLPS-3 conducted, from 2011 to 2014 (Figure 2). This latter time period is one characterized by the emergence of new social norms against ethnic politics in Kenya, largely in response to the trauma of the 2007 violence (Horowitz and Kim 2016). Since these social norms may be emerging more strongly in the urban areas (Horowitz and Kim 2016), this could explain the timing of the ethnic identification results. In short, the political context associated with KLPS-2 may have facilitated a negative impact of urbanization on intergroup trust, whereas the political context associated with KLPS-3 may have been more conducive to a negative impact of urban migration on ethnic identification. Future research could more directly test how and why the political and social contexts condition the impact of urban migration.

Finally, future research should examine how changes in ethnic identification and trust translate into broader transformations in ethnic voting behavior and ethnic-based political mobilization. As Nathan (2016) emphasizes, reductions in ethnic identification in urban areas are not guaranteed to eliminate ethnic voting or political mobilization along ethnic lines. If voters in urban areas continue to have instrumental incentives to support coethnics or face pressure from social networks to support coethnic candidates, ethnicity can remain salient in electoral politics, even as psychological attachments to ethnic identity and individual ethnic bias both diminish (Berge et al. 2020; Nathan 2016;). Nevertheless, there is evidence of a more class-based politics emerging in some cities in Africa and elsewhere. It will be important for future research to investigate how and when the individual-level changes in ethnic identification and trust associated with urbanization result in transformations in the nature of ethnic politics.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix A: Outcome definitions and deviations from PAP

Appendix B: Results for Full Set of Pre-Specified Outcomes

Appendix C: Predictors of Urbanization, with restricted sample

Appendix D: FDR adjusted q-values

Appendix E: Results dropping KLPS Round 2 Wave 1

Appendix F: Further Accounting for Coethnicity with the Enumerator

Appendix G: Main results using tracking weights only

Appendix F: Analysis of Kenya Afrobarometer Data