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Effects of Jobs on Ethnic Switching – Evidence from a Field Experiment in Ethiopia

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ABSTRACT *Ethnicity is a dynamic construct, with individual-level ethnic switching having been reported in numerous contexts. Ethnic switching, typically attributed to instrumental or social identity motivations, is hypothesized to be influenced by employment, as it facilitates a shift away from land-based, ethnic dependencies. However, confirming this theory is challenging due to inherent selection biases in employment. Collaborating with 27 firms across five Ethiopian regions, we randomized job offers to women. Utilizing longitudinal data spanning several years, we find that formal employment causally increases ethnic switching. In-depth qualitative interviews in the two regions with the highest incidence of switching indicate that instrumental factors, including fear during work commutes, are important mechanisms.*

KEYWORDS: ethnicity; employment; Ethiopia; identity

1. Introduction

The constructivist perspective on ethnicity, substantiated by an extensive body of evidence, convincingly contests the early primordial theories that deemed ethnicity as intrinsic and immutable (Geertz 1973). Ethnic switching, defined in this study as self-reporting membership to varying ethnic groups over consecutive survey waves, is a phenomenon recorded in multiple contexts.

Rademakers and van Hoorn (2021) found that nearly 7 percent of participants in an Indonesian survey reported a change in their ethnic identity over a span of 14 years. After a land reform in Colonial India in the early 1900s, Cassan (2015) estimated that in 20 years, 7.5 percent of the exposed population manipulated its identity. Using census data from the USA between 1880 and 1940, Dahis et al. (2019) estimate that at least 1.4% of all black men passed for white each census interval.

Traditionally, in Ethiopia, people inherit one ethnicity from one's father. Yet, ethnicity changes have also been observed in Ethiopia (Green, 2020). Such changes are postulated to be

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driven by either instrumental motivations or social identity considerations. Ethnic identity switching is more likely to occur among individuals who undergo significant life events, such as migration or intermarriage (Rademakers and van Hoorn, 2021) or to avoid discrimination (Cassan, 2015; Dahis et al., 2019).

While the potential impact of formal employment on ethnic switching has been theorized, the causal link between these two factors remains untested empirically. We address this research gap by investigating the causal effects of employment on changes in ethnic identity, using data from a randomized experiment in Ethiopia initially collected by Kotsadam and Villanger (2022) and Aalen et al. (2024). The randomized field experiment offered jobs to a large cohort of equally qualified women who applied to 27 firms across five Ethiopian regions. The baseline data was collected prior to randomization, and the participants were followed for around three years, during which four additional survey waves were conducted. The combination of longitudinal data on ethnic switching and a field experiment enables us to investigate the causal effects of employment on ethnic identity changes. Additionally, we develop a theoretical framework in this paper to examine the benefits and costs of ethnic switching, testing several auxiliary hypotheses and employing a mix of qualitative and quantitative data to explore underlying mechanisms.

Our analysis of individual-level longitudinal data reveals that approximately 8 percent of the women shift ethnic identity over the period. The observed switching is unlikely to be attributed to random errors, as it aligns with our framework's predictions. Specifically, we find a higher rate of switching among mixed-ethnicity couples and minority group members, and we find that individuals often switch to a dominant ethnicity within their region. Leveraging the random variation introduced by the field experiment, we discover that women who were offered a job post-baseline survey were 75 percent (4.3 percentage points) more likely to alter their ethnic identification. Not all women offered jobs start working and around 30 percent of the women not offered a job in the experiment managed to find other jobs. Taking this into account and calculating the causal effect of employment, as opposed to the reduced form (intention to treat) effect of job offers, the effect rises to 183 percent (11 percentage points).

To gain deeper insights into the mechanisms driving these effects and to differentiate between competing theories, we conducted comprehensive qualitative interviews in the two regions with the highest switching rates. We interviewed women who switched and those who did not, women who were randomized to receive job offers and those who were not, and women in both ethnically mixed and non-mixed relationships. By employing an iterative approach, we utilized qualitative data to explore mechanisms behind the identified effects and revisited the quantitative data with new hypotheses generated from the qualitative interviews. This integrated methodology enhances our understanding of the complex interplay between employment and ethnic identity changes.

The qualitative interviews reveal clear indications of ethnic switching for instrumental reasons, but not simply in order to gain material goods or to avoid discrimination. In addition, the women stressed the security concerns of being minority women and commuting to work.

In the first location with the highest switching rate, the Oromo dominated city of Dire Dawa, ethno-religious conflicts influenced perceptions of safety among interviewed women. Ethnic switching emerged as a strategy to ensure personal security, particularly for working women who had to leave their homes daily. Surprisingly, the most common switch was not towards the Oromo majority but to the Amhara, the second-largest group. This was attributed to the lower cost of switching to Amhara due to language (traditionally the lingua franca of Ethiopia) and religious factors. Most Oromo in Dire Dawa are Muslims (Jamal, 2023). During religious conflicts, Oromo Orthodox Christians faced challenges within the majority ethnic group, leading them to switch to the Amhara identity to gain co-religious support.

In Hawassa, the second location with high switching rates, a city with a Sidama majority, ethnic switching was likely driven by safety concerns and material gain, but not religion.

Hawassa has experienced long-standing competition for resources and power between ethnic groups, particularly the Sidama and Wolayta (Aalen, 2021), leading to a heightened perception of insecurity among inhabitants. In the qualitative interviews, working women stated that they were more likely to consider switching to the majority Sidama ethnicity for security reasons. Furthermore, political mobilization for Sidama control of Hawassa fostered a perception that the Sidama were favored in job opportunities and resource distribution, incentivizing people to adopt a Sidama identity.

Several of our findings align with the concept of instrumental ethnic switching, which we emphasize in our theoretical framework. However, we also underscore the role of fear and security concerns as complementary factors driving this phenomenon. This additional consideration helps elucidate the differences between the treatment and control groups in our study. While shifting to the ethnic majority or the group in power might be a rational choice in light of ethnopolitical favoritism or discrimination, it does not account for the discrepancy between those offered a job and those who were not. We posit that commuting to the workplace exposes working women to more conflict than their counterparts who stay at home, prompting them to make strategic decisions regarding ethnic self-identification and switching. Going back to the quantitative data we find that women offered a job spend more time commuting and that commuting time is correlated with ethnic switching.

Though women in both regions emphasized fear and security concerns during qualitative interviews, alternative factors could potentially influence the effect of job offers on ethnic switching. While these factors may be feasible, we attribute minimal influence to the controlled and monitored working environment, which provides limited opportunities for substantial interactions (Aalen et al., 2024). Furthermore, our quantitative data revealed no significant role of workplace interactions, particularly with no observable difference in treatment effects based on variation in firms' ethnic diversity. In our research context, exposure to conflict during work commutes emerges as a key explanatory factor. While different factors may hold significance in other contexts, our results point at employment as a causal contributor to ethnic switching, establishing instrumental switching as a credible mechanism.

2. Previous literature and theoretical framework

Ethnic switching is linked to ethnic identification, for which the theoretical literature is more developed. Two opposing views exist regarding the relationship between 'modernization' – encompassing urbanization, education, industrialization, and formal sector employment - and ethnic identification (see comprehensive overviews by Robinson (2014) and Kramon et al. (2022)).

The 'first generation' of modernization theories posits that national identity strengthens relative to ethnic identification as modernization progresses (Inglehart and Welzel, 2005). Specifically, industrialization and transitioning away from subsistence agriculture is anticipated to reduce dependency on land and ethnic group identification (Green, 2019). Conversely, the 'second generation' of modernization theories contends that ethnic identification intensifies with industrialization due to increased competition for resources (Esman, 2004).

The evidence supporting both theories is mixed and primarily based on correlational findings, especially regarding employment. Robinson (2014) discovers a correlation between formal employment (as well as urbanicity and education) and stronger national identification in Africa using Afrobarometer data. Eifert et al. (2010) find that non-agricultural employment correlates with a stronger ethnic identity in a sample of 10 African countries. Green (2019) observes that countries experiencing the most significant industrialization between 1961 and 1985 become less ethnically fractionalized. However, Green (2021) reports less ethnic change among employed individuals.

Additionally, there is literature on how ethnic diversity correlates with economic growth. It shows that high levels of ethnic diversity in Africa potentially hurt economic growth on a macro level (Alesina et al., 2003; Easterly and Levine, 1997; Montalvo and Reynal-Querol, 2005) and a positive effect on wages and productivity at the city-level (Montalvo and Reynal-Querol, 2021). However, this literature ignores the possible reverse causality whereby economic growth and industrialization may affect ethnicity and ethnic diversity.

While these correlations are intriguing, they do not establish whether employment causally affects ethnic identification and switching. It is plausible that a third variable influences both factors.¹ Our main hypothesis is, therefore, double sided, and we will test whether: *Job offers have a causal effect on ethnic switching.*

From an instrumental perspective, switching ethnicity occurs if the benefits outweigh the costs. The costs of switching are clear in terms of identity costs and perhaps the loss of social approval. The costs associated with ethnic switching vary depending on individual circumstances and the direction of the switch. Hence, the costs will be highly context dependent. Nonetheless, there are some key aspects that affect the costs. This reflects a constructivist understanding of ethnic identity: while ethnicity can be constructed, the specific cultural repertoire available decides which foundation the identity can be constructed on (Eriksen, 1998). Language is a key factor, often to the extent that switching will be impossible for many people if language differences are clearly delineated by ethnic boundaries and if you cannot already speak the language. Religion is another factor; it is more costly to shift to an ethnic group that is closely related to a religious faith that you do not already adhere to. This is particularly the case in highly religious societies, such as Ethiopia. In areas where the majority has more power than the minority, it is costlier to shift to the minority than to the majority. It is also less costly to shift to an ethnic identity if you know many people from that group, or if you are in a mixed relationship. Due to ethnic federalism in Ethiopia, being a minority often implies being disadvantaged (on ethnic federalism, see context-section below).

There are many potential benefits of changing ethnic identity. The most frequently discussed benefit in the literature is ethnopolitical favoritism, where it may be advantageous to shift to the majority or the group in power (e.g. Green, 2020). Other benefits include avoiding various forms of non-political discrimination. Michelitch (2015), for instance, finds that co-ethnics pay less for taxis in Ghana. Minorities may strategically signal or even change their ethnic identification to minimize discrimination. Arab car dealers in Israel hide their names in advertisements (Zussman, 2013), and Asian job applicants in the US conceal racial cues in their job applications (Kang et al., 2016). Kudashvili and Lergetporer (2022) find that minority high-school students in Georgia strategically misrepresent their ethnicity in a trust game when given the opportunity. Cassan (2015) shows that when a law was passed in Colonial Punjab that only allowed certain castes access to land, people switched to these castes to buy and own land. Dahis et al. (2019) demonstrated that black Americans passed as white between 1880 and 1940, even though it was illegal, and those who passed experienced an increase in income.

Several studies have emphasized the impact of conflict, saliency, and fear on ethnic identification and national identity. Ananyev and Poyker (2023) observe that conflict diminishes national identity in Mali. Eifert et al. (2010) report that national identity weakens and ethnic identity strengthens as elections approach, particularly in competitive elections. Although they attribute this to increased ethnic saliency and a model of political favoritism, the results could also be consistent with fear as a contributing factor.

The interplay of costs and benefits varies across different regions and interacts with employment in diverse ways. For instance, conflict and fear may affect working individuals more significantly if their jobs require them to frequently engage with society. Similarly, ethnic favoritism could be more important for those who regularly interact with others. However, it may be less critical for individuals who have already secured employment and are less reliant on patronage goods (e.g. Escribà-Folch et al., 2018).

By considering these factors, we can better understand the complex dynamics that influence ethnic identification and national identity in various contexts and the role employment plays in shaping these relationships.

3. Context

Ethiopia has more than 80 different ethnic groups, and a history of ethnic rank and domination. The Amhara, the second largest group by numbers, dominated the state for centuries under the Solomonic dynasty, where the Amharic language and the Ethiopian Orthodox faith became a prerequisite for access to state power. Clapham (1988) argues that this led to switching towards the Amhara identity over time (Clapham, 1988). The Amhara, together with the Tigrayans in the north (the third largest group), speak Semitic languages, which are distinct and incomprehensible from the numerically largest ethnic group in the country, the Oromo, who speak a Cushitic language. The Oromo have traditionally been considered as second-class citizens, and Oromo language and cultural expressions have throughout the history of the modern Ethiopian state been suppressed (Baxter, Hultin, & Triulzi, 1996). The destiny of linguistic and cultural suppression has been shared with other minority groups around the country, including the largest group in the south, the Sidama. Since the mid-1970s, several ethnic liberation fronts were established to work for greater autonomy and rights for their groups, among them the Oromo Liberation Front (OLF), the Tigrayan Peoples Liberation Front (TPLF), and the Sidama Liberation Movement (SLM). The TPLF, which managed to control the Tigray region from 1989, assumed national power when they ousted the Derg regime in 1991. It soon established and dominated the Ethiopian People's Revolutionary Democratic Front (EPRDF), which remained the ruling party until 2018. As a response to the century old Amhara domination, it introduced an ethnic based federal system, where the larger ethnic groups, among them Amhara, Oromo, Tigray, Somali, and Afar, gained subnational power in ethnically defined regional states, and where the right to self-determination of ethnic groups became constitutionally enshrined (Turton, 2006). As pointed out by Green (2020), the establishment of ethnic federalism diminished the incentives to identify as Amhara among formerly oppressed groups such as the Oromo. Perhaps as a result, the Amhara have experienced a noticeable demographic decline over the past quarter-century relative to other ethnic groups (Green, 2020).²

Three decades of ethnic based federalism seem to have strengthened ethnic identities (Ishiyama, 2022). When the only way to be politically and administratively recognized is through your ethnic group, political mobilization naturally takes an ethnic language (Aalen, 2011). This has ultimately also had an impact on the way the Amhara identify. While the Amhara have historically been the most supportive of the 'Ethiopian idea' or that Ethiopian identity transcends ethnic identities – pan-Ethiopianism (Gudina, 2003), Amhara nationalists were initially among the strongest opponents of the ethnic federal arrangements. The Amhara thus became the backbone of opposition parties working for the abolition of ethnic federalism from the early 1990s. During the last decade, however, the perception that the Amhara as a group has been disfavored in the access to national political power and resources has gained support, particularly compared to the Tigrayans and the Oromo. Among the younger Amhara there is now a growing popular support for Amhara ethno-nationalism, replacing the traditional support for pan-Ethiopianism (Shiferaw Chanie and Ishiyama, 2021).

When the EPRDF and its party leader Meles Zenawi took power in 1991, it de-emphasized national identity in favor of ethnic identities. This does not mean, however, that the party disregarded nationalism and national unity. Instead, ethnic political mobilization and ethnic federalism were seen as a first step and a vehicle to diffuse opposition to the center and for the party to dominate the national state power (Bach, 2011). In the war with neighboring Eritrea from 1998 to 2000, many of the national symbols and the idea of Ethiopian nationalism were rehabilitated, and a dual ethnic and national identity was promoted. When the EPRDF was

challenged by the pan-Ethiopian opposition party Coalition for Unity and Democracy in the 2005 elections, EPRDF again took a stronger nationalistic stance to fend off the opposition. Meles Zenawi's launch of the developmental state, prioritizing national economic growth and development (Meles Zenawi, 2012), also led to a lesser focus on ethnic politics. The first Growth and Transformation Plan from 2010 and the EPRDF program of 2016 promoted the view that national unity/identity and economic growth were mutually dependent. While economic growth would strengthen the unity of the state, a stronger national vision and identity would also be a prerequisite for creating enduring economic growth (EPRDF, 2016).

Independent of EPRDF's attempt to promote a dual national and ethnic identity, ethnic based clientelism and local competition for power and resources along ethnic lines have upheld ethnic political mobilization at regional and local levels. Resentment with perceived ethnic favoritism combined with an increasing opposition to EPRDF's dominant party rule led to large popular protests in Amhara and Oromia from 2014 onwards. These protests which grew steadily until 2018, forced the EPRDF to reform itself by electing the reformist Oromo politician, Abiy Ahmed as chairman of the party and Prime Minister of the country in March 2018 (Aalen, 2020). Abiy Ahmed transformed the EPRDF into the Prosperity Party in 2019. The new party and Abiy Ahmed's idea of *Medemer* (synergy/addition in Amharic) was no longer based on ethnic organization, but instead attempting to 'de-ethnify' some features of the regime, referring to 'Ethiopianness' as a way to transcend ethnic differences. He could, however, not undo the fact that the protest movements that had brought him to power were based on ethnic political mobilization, and that much of the regional and local politics were still dominated by competition between ethnic group and perceptions of ethnic favoritism. As a result, Ethiopia has seen more ethnic conflict since Abiy Ahmed came to power (Aalen, 2021). The eruption of armed conflict between the Tigray regional government and the federal government allied with Amhara ethno-national forces and the Eritrean army from 2020 to 2022 has further aggravated ethnic tension in the country (Fischer, 2022).

Ethnic identities in Ethiopia have historically been deeply politicized (Mains, 2004), as evident through ethnic animosity, federalism based on ethnicity, and recent political events. For women, ethnicity informs choices related to spouse, cultural participation, attire, settlement, and informal networks for support. While intermarriage between ethnic groups is common and mixed settlements are typical, especially in urban regions (Breines, 2020), this blend can offer protection during ethnic conflicts, providing diverse affiliations. However, in heightened ethnic strife, these very affiliations might pose risks, potentially dividing families and friends. Thus, ethnic identification can serve as both a shield and a threat.

4. The field experiment and data

We use data from a field experiment initially conducted by Kotsadam and Villanger (2022) and Aalen et al. (2024). The initial data collection focused on household dynamics, political participation, and intimate partner violence. The authors of the initial studies collaborated with 27 footwear and apparel manufacturing factories situated within industrial parks throughout five distinct regions in Ethiopia, namely Tigray, Amhara, Oromia, Southern Nations, Nationalities and People's Regional State (SNNPRS), and the federal city of Dire Dawa. The hiring process in these factories typically involves mass recruitment, wherein applicants convene on a designated day and undergo verbal and physical examinations to determine eligibility.

Participating factories initially assessed all applicants, ascertaining their suitability for the positions. We subsequently generated lists of eligible female candidates who were living with their partners. Women not cohabiting with a partner were hired through standard procedures. From the lists of eligible partnered applicants for each factory, the women were randomly assigned so that 50% received a job offer at the given facility (treatment group), while the remaining women constituted the control group and did not receive job offers.

Randomization was feasible due to the substantial surplus of qualified candidates in comparison to the available job vacancies, and it did not alter the number of employment opportunities offered to women. Prior to randomization, applicants were informed about the process and perceived it as equitable, as equally qualified individuals were granted equal chances of obtaining job offers. Kotsadam and Villanger (2022) and Aalen et al. (2024) argue, the randomization is ethically justifiable for the same reasons, and they also emphasize that this procedure eliminates potential biases arising from factors such as physical attractiveness, corruption, and sexual exploitation, which they encountered in anecdotal accounts during their field visits. Ethical considerations are discussed further in the supplementary material section A.3.

Surveys among female participants were conducted to gather initial data (Wave 1) before their employment commencement. The timeline for this baseline data collection varied, contingent upon each firm's recruitment schedule. Some firms hired new groups of workers multiple times within the specified period. Follow-up data were collected approximately six months after the initial interview (Wave 2), with subsequent follow-ups at 12, 18, and 34 months post-baseline (Waves 3-5). Out of the 1,463 women randomly assigned in the baseline sample, 1,262 were interviewed in Wave 2 and 1,054 in the final Wave 5. We create a balanced panel of women that participated in all five waves consisting of 891 women. We show in supplementary material Table A.3 that attrition is not associated with treatment status (column 1). The only variable that is correlated with attrition is age, whereby older women are less likely to attrit. Following the recommendation in Hirshleifer et al. (2019) we also test for treatment heterogeneity in attrition and find that only age is marginally statistically significant such that the age differential in attrition is slightly less pronounced for the treated.

Female enumerators from an independent survey team conducted interviews with the women prior to their employment start date. Baseline data collection occurred between March 2016 and March 2018, depending on each firm's hiring timeline, with each subsequent follow-up data collection carried out around six months after the preceding interview. The survey encompassed modules on demographic and background information, as well as metrics on earnings and other socioeconomic variables.

Our main outcome is *Ethnic switching*, which we define as equal to one if people answer different ethnicities to the question of which ethnic group they belong to between survey rounds. We see in Table 1 that around 8 percent of the total sample changed ethnicity. Of course, we do not know what these women identified as before the baseline survey and cannot account for the possibility that some of the women might have changed their ethnicity before being recruited. Our main baseline variables are Treatment (1 if offered the job), a dummy for ever having had a formal wage job, age in years, dummy variables for being Muslim or Protestant (with the excluded category being Orthodox Christians), and dummy variables for having medium (10 years) or high (over 10 years) education. These variables were pre-specified to be used in the papers by Aalen et al. (2024) and Kotsadam and Villanger (2022). The descriptive statistics for the variables are also shown in Table 1.

In addition, we also describe the shares belonging to the different ethnic groups in the sample at baseline. We see in column 1 that 44 percent of the sample identify as Tigray, 17 percent as Sidama, 16 percent as Oromo, 15 percent as Amhara, and 8 percent as belonging to other ethnic groups.

To test for baseline balance between treatment and control group, we regress Treatment on the baseline control variables one by one, while controlling for the blocking variable. The results show that being Muslim is statistically significantly correlated with treatment, which has also been documented by Aalen et al. (2024) and Kotsadam and Villanger (2022). We also see that there are fewer in the treatment group that belong to the any of the 'Other' ethnic groups and the difference between treatment and control is also significant at the 10 percent level for Tigray. Since randomization is correlated to some of the baseline controls, we present results where we control for all variables as well.

Table 1. Descriptive statistics

	(1) All		(2) Treated		(3) Control	
	Mean	sd	Mean	sd	Mean	sd
Ethnic switching	0.079	(0.269)	0.102	(0.302)	0.057	(0.232)**
Treatment	0.486	(0.500)	1.000	(0.000)	0.000	(0.000)
Any formal wage job (ever)	0.313	(0.464)	0.330	(0.471)	0.297	(0.457)
Age	25.260	(6.253)	25.196	(6.411)	25.321	(6.106)
Orthodox	0.586	(0.493)	0.617	(0.487)	0.557	(0.497)
Protestant	0.251	(0.434)	0.245	(0.430)	0.258	(0.438)
Muslim	0.158	(0.365)	0.139	(0.346)	0.177	(0.382)**
Low education	0.287	(0.453)	0.291	(0.455)	0.284	(0.451)
Medium education	0.508	(0.500)	0.485	(0.500)	0.531	(0.500)
High education	0.204	(0.403)	0.224	(0.417)	0.186	(0.389)
Oromo	0.157	(0.364)	0.159	(0.366)	0.155	(0.362)
Amhara	0.153	(0.360)	0.155	(0.362)	0.151	(0.358)
Tigray	0.437	(0.496)	0.446	(0.498)	0.428	(0.495)*
Sidama	0.171	(0.376)	0.139	(0.346)	0.201	(0.401)
Other	0.083	(0.276)	0.102	(0.302)	0.066	(0.248)**
N	891		433		458	

Notes: The table presents means and standard deviations for three different samples. Column 1 shows the full sample, column 2 the treated individuals and column 3 the control individuals. P-values are $\leq 0.05^{**}$, and $\leq 0.1^*$. These are tests of balance conducted by regressing treatment on the variables one by one while controlling for block fixed effects. If we include all variables jointly, then Muslim is the only statistically significant control and Ethnic switching is still statistically significant.

5. Qualitative data

In addition to the quantitative data, we carried out extensive semi-structured qualitative interviews in the two regions where we found the most switching (see results below). We did 13 in-depth interviews in Dire Dawa and 20 in-depth interviews in Hawassa in May and October 2022. The interviews lasted about 1 to 1.5 hours. They were conducted with an interpreter who translated between English and Amharic and English and Sidama. The interviews were either done in the women's homes or in coffee shops where the women felt comfortable and where we could get privacy. None of the interviews were recorded to ensure that the women felt safe and comfortable sharing their thoughts. We describe the qualitative interviews and methodology more extensively in Appendix Section A.2.

We interviewed women who switched and did not switch ethnicity, women randomized to job offers and not, and women in mixed and non-mixed relationships. While conducting the quantitative interviews, we asked the participants indirectly about ethnic switching as we did not want to press the women into an uncomfortable situation as ethnic switching can be seen as a contentious issue. We told the women we interviewed, regardless of their ethnic status, that some women in our sample have been reporting different ethnicities between surveys and asked them to reflect on why this might have happened.

6. Empirical strategy and main results

Our main specification is the following intention to treat (ITT) model:

$$(1) \text{Ethnic switching}_{i,t4} = \alpha Y_{i,t0} + \beta \text{Treatment}_i + \gamma X_{i,t0} + \delta \text{List}_i + \varepsilon_{it},$$

where i indexes individuals, $t0$ refers to baseline values, and $t4$ is the last follow up (Wave 5). *Ethnic switching* _{$i,t4$} is a dummy variable equal to one if the woman ever reports a different ethnicity between the waves. *Treatment* _{i} is a dummy variable equal to 1 if the woman was

randomized to get the job offer and zero if not. The main coefficient of interest is β , which captures the so-called ITT effect, or the effect of receiving the randomly assigned job offer on the outcome of interest. We always include list fixed effects (blocking variables) as women are randomized within this unit. We include the main control variables (i.e. work history, age, dummies for religion and education) in some specifications to see if we can increase precision. We use heteroscedasticity robust standard errors in all estimations.

As we saw in Table 1, we find that around 8 percent of the women change their ethnicity over the five waves. Moving over to the causal effects of job offers, we see a clear causal effect of job offers on changing ethnicity in column 1 of Table 2. We see that 6 percent of the control group women changed ethnicity over the years while over 10 percent of the treated women did so. The difference of 4 percentage points corresponds to 75 percent of the control mean and is statistically significant. We show that the results are similar if we include the main control variables as pre-specified in the previous papers using this experiment in Appendix Table A.1. That table further shows that controlling for baseline ethnicity as well as all variables together also lead to similar results. When all variables are included together the p-value drops to 0.054 so the effect is no longer statistically significant at the 5 percent level.

We can compare this causal effect to the simple correlation between formal employment and changed ethnicity, which we show in column 2. We see that the magnitudes are quite similar. To formally test for the effects of formal employment on ethnic switching we can scale the reduced form effect by the first stage difference in formal employment. We see in column 3 that 30 percent of the control women managed to find other jobs. The effect of employment is 0.4 so 70 percent of the treated women had a job. Scaling the effect of the randomized job offer by the effect it had on employment in an instrumental variables regression (two staged least squares, 2SLS) we see in column that the causal effect of employment is 11 percentage points, or 183 percent of the control mean. These are large effects.

In column 1 of Table 3, we see that people in ‘mixed’ relationships at baseline are more likely to change and in column 3 that majorities in the regions are less likely to change. This strengthens our belief that the ethnicity change in our sample is genuine and not due to reporting errors. We note, however, that the treatment effect is not statistically significantly different along these dimensions but neither can we reject relatively large differences.

Our sample’s major ethnicities are Oromo, Amhara, Tigray, and Sidama. Smaller ethnic groups are defined as ‘Other’. When we do the analysis by ethnic group in Table 4, we note

Table 2. Effects of employment in wave 2 on ethnic switching

<i>Model:</i>	(1) <i>Reduced form</i>	(2) <i>OLS</i>	(3) <i>First stage</i>	(4) <i>2SLS</i>
Outcome:	Change ethnicity	Change ethnicity	Formal employment W2	Change ethnicity
Treatment	0.043** (0.018)		0.40*** (0.030)	
Formal employment in wave 2		0.039** (0.020)		0.11** (0.045)
Control group mean	0.06	0.06	0.30	0.06
N	891	891	891	891
Controls	Block	Block	Block	Block
Kleibergen-Paap rk LM statistic	NA	NA	149.550	NA
Cragg-Donald Wald F statistic	NA	NA	179.345	NA

Notes: Column 1 shows the first stage effect of job offer on changing ethnicity. Column 2 shows the correlation between having had a formal wage during the last 6 months in wave 2 and changing ethnicity. Column 3 shows the first stage effect of job offers on formal employment in wave 2. Column 4 shows the effect of employment in wave 2 on changing ethnicity where employment is instrumented by the random job offer. Robust standard errors in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, $\leq 0.1^*$.

Table 3. Correlates of ethnic switching and heterogeneity of the treatment effect. The dependent variable in all regressions is changed ethnicity

	(1)	(2)	(3)	(4)
Mixed ethnicity couple	0.14*** (0.048)	0.096 (0.060)		
Majority in region			-0.12*** (0.045)	-0.13** (0.058)
Treatment		0.035** (0.016)		0.021 (0.069)
Treatment*Mixed ethnicity couple		0.093 (0.090)		
Treatment*Majority in region				0.021 (0.071)
Control group mean	0.06	0.06	0.06	0.06
N	890	890	891	891
R-squared	0.13	0.14	0.13	0.14
Controls	Block	Block	Block	Block

Notes: Robust standard errors in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, $\leq 0.1^*$.

Table 4. Effects of job offers on ethnic switching for different ethnic groups. The dependent variable in all regressions is changed ethnicity

	(1) Changed to Oromo	(2) Changed to Amhara	(3) Changed to Tigray	(4) Changed to Sidama	(5) Other
Treatment	0.094 (0.057)	0.049 (0.049)	0.0095 (0.0069)	0.087* (0.048)	0.018 (0.12)
Control group mean	0.10	0.12	0.00	0.08	0.13
N	140	136	389	152	74
R-squared	0.34	0.43	0.51	0.33	0.20
Controls	Block	Block	Block	Block	Block

Notes: All regressions controls for block fixed effects. Robust standard errors in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^*$.

that there are clear differences in switching. Looking first at the control group we note that not a single Tigrayan changed ethnicity, and that ethnic switching is between 8 and 13 for the women in the other ethnic groups who were not offered a job. We understand the lack of ethnic switching among Tigrayans to be a result of the ethnic homogeneity of the region, including in urban areas. The groups with the largest share of switchers are treated women with Sidama or Oromo ethnic identity at baseline. The treatment effect differences in absolute terms are also largest for the Sidama ethnic group and for the Oromo ethnic group. Note that the samples become smaller, and we only observe statistically significant differences (at the 10 percent level) for Sidama women. These differences closely correspond to differences across areas, and we see the largest changes in Dire Dawa and Hawassa.

Importantly, the switch is not always to the ethnic political favorite group in the region, meaning for instance that in the now Sidama region, the switch is not always towards Sidama ethnicity. Switching is, however, more common for the minority group as 21 percent of the minority change ethnicity while only 5 percent of the majority do so.

7. Mechanisms

To investigate mechanisms, we combine qualitative and quantitative data. As we saw the most differences in two regions, we proceeded to conduct qualitative interviews in these two areas.

When asking individuals about ethnic shifting in the qualitative interviews, a typical first response was their disapproval of switching, which is seen as unethical or wrong. A Sidama working woman who herself changed ethnicity from Sidama said, *'It is lying, it is not good'*. Another said, *'They should speak the truth. Lying is not good. They should stay with that ethnicity'*. Regardless of whether the women were among those who changed ethnicity, most of them spoke of disapproval the first time they were asked. Then we requested that they consider why some people would want to change their ethnicity. Some did not know and did not want to hypothesize why this might happen. However, upon reflection, most participants produced reasons why people might change their ethnicity. The most common response was to get job opportunities and safety. A Sidama woman who changed ethnicity answered, *'To hide and protect themselves from problems'*. Another told us, *'If it is necessary, to get an opportunity to get money, to get job opportunities. If you speak Sidama, you get a job. If there are two people equally qualified, and one speaks Sidama, he will get the job'*.

Some women admitted to changing ethnicity, whereas others did not want to admit that they had done it.

The costs of shifting are context specific and also determine the direction of the shift

In Dire Dawa, the conflict between Muslims and Christians is dividing the Oromo majority group along religious lines. The Muslim Oromo are referred to as Hararghe Oromo linked to the old province of Hararghe in the Eastern parts of Ethiopia, while the Christians are linked to the Shoa Oromo, originating from old Shoa province in the central highlands. In the multi-ethnic and -religious city of Dire Dawa, the Shoa Oromo have traditionally dominated the administration, perhaps as they as Christians have been easily assimilated into the dominant Amhara culture. During the reign of the EPRDF, however, the Hararghe Oromo became politically stronger, both in government and in opposition parties such as the Oromo Federalist Congress and the Oromo Liberation Front (Jamal, 2023).

A woman working in a factory for several years explains how these identities are manifested: *'This region is ours, say the Hararghe Oromo. The region does not belong to the Shoa Oromo, they say. So, Shoa Oromo say that they are Amhara, because they are Christians, like the Amhara. The Hararghe Oromo say that proper Oromo have to be Muslims'*.

The association between Oromo and Islam, and Amhara and Christianity, is so strong that many women interviewed used 'Oromo' and 'Muslim' as synonyms. Moreover, on the street, children pointed at people wearing Orthodox cross necklaces and shouted 'Amhara'. Additionally, several of the Christian women we interviewed hid their crosses under their clothes and wore veils in public. Based on these observations, we hypothesized that Christian Oromos might be more likely to switch ethnic identities to avoid discrimination. Amharic was long considered the lingua franca in urban areas in Ethiopia; many people will know and speak Amharic in towns (Ado et al., 2021). In addition, Amharic is the working language of the Dire Dawa city government (Asnake, 2014). As language skills are essential for ethnicity in Ethiopia, the prevalence of the Amharic language in urban areas of Dire Dawa makes it, on average, easier to pass as Amhara. We revisited the quantitative data to test this hypothesis and found support for it in Table 5. Oromo Christians switch ethnicity more frequently (column 1), and the treatment effect of having a job is more pronounced for Christian Oromos (column 2). 56% of the Christian Oromos who change ethnicity, change to Amhara in second round. We also observe that this group is more likely to switch religion, while only 3% of sample change religion, it is 11% among Christian Oromo³.

In Hawassa, another multiethnic city in Ethiopia, the conflict lines are along ethnic identities, but not related to religion as in Dire Dawa. Hawassa, a city established on Sidama land during the reign of Emperor Haile Selassie, has been the capital of the SNNPRS since the merger of five southern regions in 1995 (Aalen, 2011). Since 2020, when the Sidama people gained a separate regional state, Hawassa became the capital of the new Sidama region. Hawassa has been a multi-ethnic city since its establishment, with commercial farms bringing in farm workers especially

Table 5. Effects of job offers on ethnic switching for different groups. The dependent variable in all regressions is changed ethnicity

	(1)	(2)
Oromo	-0.14* (0.082)	
Christian	-0.052 (0.057)	0.16** (0.078)
Oromo*Christian	0.37*** (0.10)	
Treatment		-0.014 (0.047)
Treatment*Christian		0.28** (0.12)
Control group mean	0.06	0.10
N	891	140
R-squared	0.15	0.47
Controls	Block	Block

Notes: The sample in column two is restricted to Oromo women at baseline. All regressions controls for block fixed effects. Robust standard errors in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^*$.

from the neighboring Wolayta and Kambata. During the 2000s, when Sidama elites within the EPRDF party started campaigning for Sidama statehood, more Sidama moved into the city from surrounding rural Sidama areas, and more Sidama gained administrative and political posts in the city (Mains and Kinfu, 2016). During large parts of the 1990s and the 2000s, economic and political life in the city has been dominated by competition between the Sidama and other groups, particularly the Wolayta, on access to power and resources, occasionally leading to violent conflict along ethnic lines. The most serious conflict incidents in Hawassa happened in June 2018 and July 2019, involving violent clashes between members of the Sidama and Wolayta groups. Hawassa is now the host of the largest industry park in Ethiopia.

Normally, women interviewed would say that the way to determine the ethnic identity of a person is through the identity of the father. In cases where women had switched their identity, they instead stressed different aspects. A working woman, born and raised in Hawassa, who would normally be defined as an Oromo because her father was an Oromo, told us the following: *‘My father is Oromo, my mother Sidama. I am Sidama too. Even though my father is an Oromo, I feel like a Sidama, and I have registered as a Sidama. I don’t speak Oromiffa, but I speak Sidama well and feel good about it. I have been living with Sidama people all my life’*.

The ability to switch from another ethnicity to Sidama is however restricted by the ability to speak the Sidama language – demonstrating that the potential for changing ethnic identities and self-identification is limited. A woman with Dawro identity, one of the minority groups in Hawassa, explained this to us in the following way: *‘If you live outside your area, you could say that you are the identity of that area, to save yourself, or to get job opportunities. There was a Wolayta man I knew who was threatened during the conflicts. He said he was Sidama and was saved. But I could not pass as a Sidama even if I tried, because I don’t speak the language’*. The flip side of this is that a non-Sidama, speaking the Sidama language, could pass as a Sidama, and thereby be saved during critical situations, as explained by a woman from Hadiya, another minority: *‘One day I was walking on the street with my Wolayta friend. She speaks Sidama well. Suddenly, some Sidama guys approached us and threatened to hit us – saying that we were ‘Wollamo [the derogatory term for Wolayta]. She replied in Sidama and asked why they would do this. They looked at me and asked who I was. When I said I am Hadiya, they replied OK, we will leave you’*. Similarly, a women would tell that even if her father was Amhara, he would be characterized as Sidama by being born there and by speaking the language, making the whole

family identify with the Sidama: *'His parents came from Wollo [in Amhara] and settled in Sidama. He is defined as Sidama, because his mother tongue is Sidama. Everybody calls us Sidama since we speak the language. Therefore, we are Sidama'*.

The concern for personal safety was highly salient in both areas and may also explain the job effects

The qualitative findings from both Hawassa and Dire Dawa underline that the concern for personal safety is one of the factors triggering working women to make strategic choices related to ethnic self-identification and ethnic switching. Women offered a job in the industries, by the mere fact that they have to spend time on the road to and from the workplace, are more exposed to the physical dangers during conflict times than the women staying at home. In this way, entrance into the labor market seems to have a concrete impact on ethnic switching in areas of civil conflict and may point at a mechanism at play between being offered a job and ethnic identity.⁴ The interviews in Dire Dawa were conducted about a month after the latest local violent eruption.⁵ In contrast, the interviews in Hawassa were done about two years after the latest local violent episode. The timing affects the saliency of fear among the women interviewed. Nearly all the women interviewed in Dire Dawa told us they were scared, and many highlighted that they would prefer to move to a safer area if they had could afford it. Whereas among the women in Hawassa, many admitted to being very scared two years ago during the last large violent clashes but felt safe now.

In Dire Dawa, a strategy for Shoa/Christian Oromo during conflict times would be to de-emphasize their 'Oromoness', and emphasize their Christian identity, saying that they belong to the Amhara – to get the protection from the Christian Amhara community. This conversation with one of the working women explains the considerations made during such an ethnic reconfiguration from Oromo to Amhara:

Researchers: In our data, some people change from Oromo to Amhara. What is the reason?

Respondent: Because they are afraid. To save my life, I could switch my identity. In this area, there are many Muslim Oromo. To be protected, I could see myself as an Amhara, and go to the Amhara Christian areas, that is easy.

Researchers: Do you think people do this?

Respondent: I know many Oromo Christians who switch to Amhara.

Researchers: When you first were interviewed, you were registered as Oromo, then Amhara. Why?

Respondent: My ethnicity is Oromo, but my religion is Christianity. So I switched to Amhara. I am worried about the future.

Researchers: If you go to the market today, and someone asks you which group you belong to, what would you say?

Respondent: I would say that I am Amhara.

A possible reason for a 'job treatment effect' on changing ethnicity is therefore the exposure to the conflict in combination with the movement patterns of working women. If one is working, one has to spend more time outside than if one does not work. The commute to work can be quite long, as the industry park is about 15 km outside the city of Dire Dawa. On the road between the factories and the city, there is also an area where there has been turmoil during the conflict. Several women that were offered jobs recount similar experiences about having to return to factories and wait for the police to stabilize the situation on the road to their homes. The factory often provides transportation to the workers in so-called service cars (minibuses), but these do not run all day.

In sharp contrast, women who do not have formal employment can often spend little time outside their homes. One respondent only left her house every second week. Excerpts from an

interview with a working woman, a Gurage Orthodox Christian with an Amhara partner explains this, when answering our question on whether there is a difference between a housewife and those who work outside when it comes to danger during conflict: *'Home is safe at those times. For working women, they could be attacked on the way to and from work'*. Another working woman, a Christian who had switched from Oromo to Amhara, elaborated along the same lines, when asked the same question: *'Yes, we could be exposed on the way to and from work, we could be attacked by stones and guns. I was myself in danger two years ago on my way from work. I passed a market where conflict was going on and had to return to work and stay for about an hour before the police came. I had to find alternative routes to work after that incident'*. Another woman in the control group said that when asked if it better to work in factory or at home during conflict times: *'(it is)'* Better to work at home. Outside something can happen.

Similar to the situation in Dire Dawa, working women in Hawassa emphasized that their way to work was putting them more at risk than the housewives, making it more pertinent to be strategic about how they would be presenting themselves and their identities in public. Women would also take other precautions to and from work, like never moving alone. During the violent episodes in 2018 and 2019, women described how they were victims of ethnic targeting on their way to and from work: *'When the conflict erupted in Hawassa, I was on the bus on my way to work. We heard about the conflict when we arrived. The managers told us to go home. Then our bus was hit by stones and some roads were blocked. We stayed home for 5 days. Those throwing stones were young men – I think they are from here and speak Sidama. The conflict was about the regional question for the Sidama. ... They targeted the Wolayta'*.

We test the relationship between commute time for these women quantitatively (see supplementary material Table A2). We indeed find that treated women spend more time commuting and that commuting time is correlated with changing ethnicity. We also show that treatment is correlated with spending less time at home (less time in household work, but household work is uncorrelated with changing ethnicity). We do not find that formal employment correlates with changing ethnicity in the control group. This may be due to different things, including that those that self-select into employment in the control group do so since they have less security concerns or that those jobs are closer to home.

8. Other potential mechanisms

In our qualitative interviews we also heard other reasons for ethnic switching, but they did not feature nearly as common as the fear aspects, and neither were they emphasized as strongly. In line with the urbanization hypothesis a working woman in Dire Dawa told that she had moved from a rural area to the city and switched her identity through that journey: *'I identified myself as Oromo. My mother is Oromo, and my father is Amhara. In my birthplace in Oromia, there were not many Amhara. So, it was not interesting for me to identify as Amhara. But in this area, the majority is Amhara, so I am Amhara'*.

Our qualitative data also reflect explanations consistent with political favoritism and discrimination. In particular, the Sidama were perceived to be favored in access to jobs and other benefits. When asked why some women might change ethnicity, a common reply was to get a job. Some of the women only thought the discrimination was present when there were two equally qualified workers; the one with the 'right' ethnicity would get the job. Others emphasized that it was not necessarily ethnicity but the family and friends' network that comes with belonging to the majority ethnicity. Though it is not likely that the foreign owners of the factories would care about hiring from the right ethnicity, the people they outsource the hiring to might have the incentive to favor certain ethnicities due to political reasons. The fact that many respondents shifted away from Sidama during the course of the factory employment could also indicate that women, when being recruited, registered as Sidama to secure the job, and then later

returned to their original ethnicity after having the job secured. However, we could not verify this explanation, as we lack data on their pre-recruitment identities.

We believe that what happens at work has little effect on ethnic switching. The literature on contact to other groups has highlighted that prolonged contact with the outgroup may change attitudes and beliefs (e.g. Dahl et al., 2021; Elwert et al., 2023; Finseraas et al., 2019; Finseraas and Kotsadam, 2017; Scacco and Warren, 2018). Our qualitative findings, however, do not suggest that the factory impacts the way women identify. Apart from languages, and the need to speak Amharic, ethnicity does not seem to be an issue there. Amharic was the official language in the factories, but accommodations were given to the minority who did not speak any Amharic. The work environment inside the factory is disciplined and controlled (Aalen et al., 2024), so there is not much room for close contact across ethnicity in the factory. Though some women were able to talk to their coworkers during working hours, these conversations were overheard by the managers. Others did not speak to their coworkers besides the 15-minute lunch break and the commute to work. In the quantitative data we conducted an imperfect, yet informative, test by using data on the women offered jobs at the same factory.⁶ We test whether the effects of being offered a job is moderated by the ethnic diversity of the applicant pool and we find no differences.

9. Conclusion

Ethnicity, an evolving construct, frequently experiences individual-level switching, driven by instrumental or social identity motivations. This ethnic switching is often hypothesized to be influenced by employment, as it induces a shift away from ethnic and land dependencies. Despite this widely held hypothesis, validating it empirically has been challenging due to selection biases in analyzing employment. To address this, we use data from a unique field experiment with 27 firms across five Ethiopian regions, where job offers were randomized to women. Our data analysis over a three-year period revealed that formal employment causally triggers an increase in ethnic switching.

Our deep-dive into individual-level longitudinal data showed that approximately 8 percent of women transition their ethnic identity over a three-year span. The observed switching is not arbitrary but aligns with our theoretical framework's predictions. Specifically, mixed-ethnicity couples, individuals adapting to their region's dominant ethnicity, and minority group members showed a higher propensity to switch their ethnic identity. Moreover, exploiting the random variation in the field experiment, we discovered that women offered a job post-baseline were more likely to change their ethnic identification.

Delving deeper into the mechanisms driving these effects, we conducted qualitative interviews in regions with the highest switching rates. The interviews were targeted to women who switched and those who did not, women who received job offers and those who didn't, and women in both ethnically mixed and non-mixed relationships. Through an iterative approach, we synthesized qualitative data to decipher the mechanisms behind the observed effects and subsequently revisited the quantitative data with fresh hypotheses generated from these qualitative interviews.

From these qualitative interviews, we found clear indications of ethnic switching due to the security concerns women faced as minority women commuting to work. Specifically, in the regions of Dire Dawa and Hawassa, dominated by Oromo and Sidama ethnicities respectively, ethnic switching emerged as a strategic move for personal security in response to ethno-religious conflicts and resource competition.

Our findings thus provide significant insights into ethnic identities research. We document not only the prevalence of ethnic identity switching but also its correlation with external factors like employment and conflict. Furthermore, our study underscores the intricate interplay between employment, ethnicity, and conflict, reinforcing the vital role these elements play in

influencing individuals in their ethnic self-identification and switching. Ultimately, our research serves to enhance our understanding of the dynamic nature of ethnicity, opening new avenues for future studies in this domain.

There are several important limitations in the current paper that we hope future research will address. First of all, we do not know what these women identified as before the baseline survey and we can therefore not account for the possibility that some of the women might have changed their ethnicity before being recruited. Another limitation is that the data collection did not include the possibility of respondents to answer several ethnicities or mixed ethnicity. This could potentially have enriched the analysis and better reflected the degree of shifting.

Notes

1. With respect to other aspects of modernization, there is evidence that is stronger than cross-sectional correlations. Kramon et al. (2022) use longitudinal data in Kenya to find that urban migration reduces ethnic identification (and trust). Bandiera et al. (2019) use the staggered introduction of compulsory schooling laws across US states and find that education increased nation-building.
2. While in the 1984 Ethiopian census they were 0.7 percent smaller than the largest ethnic group in Ethiopia, the Oromo (28.3 percent vs. 29.0 percent), by the 1994 census they had become 2.0 percent smaller than the Oromo and were 7.6 percent smaller than the Oromo in the 2007 census (Green, 2020).
3. Around 11% of Oromo Christians (Orthodox) switch religion, however they all change to Protestant Christian.
4. We believe it to be the commute to the factory and not the actual work that is posing a danger, as local and national police heavily guard the industry parks.
5. The latest conflict was related to a demonstration by Muslims against attacks on Muslims in Gondar, Amhara region in relation to a Muslim Holiday (<https://epo.acleddata.com/2022/05/11/epo-weekly-23-april-6-may-2022/>).
6. We do not have access to full data over people working in the factories.

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