

Banking under Conflict Managers and Organizational Design*

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Abstract

How do organizations adapt internally when ethnic divisions intensify? We develop a model in which organizations jointly choose managerial appointments and delegation when locally matched managers have better information but are less aligned with headquarters, and test it using a panel of Ethiopian bank branches. Exploiting variation in banks' exposure to ethnic conflict across their branch networks, we find that conflict increases the appointment of locally matched managers, while reducing lending autonomy and leaving branch credit mostly unaffected. Conflict-exposed branches are more likely to be staffed by insiders reassigned within the bank. An LLM-based CEO vignette exercise corroborates this mechanism.

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1 Introduction

How do organizations allocate decision-making authority when they operate across socially divided populations, and how do they adapt when those divisions deepen? Organizations face a well-known trade-off between local knowledge and internal communication costs (Garicano, 2000): delegating decisions to better-informed local agents improves the use of specialized knowledge but exposes the organization to those agents’ biases (Dessein, 2002; Alonso, Dessein and Matouschek, 2008). In socially divided environments, this trade-off takes on an additional dimension, as employees’ group identity can shape organizational design. Matching employees to customers by group identity may improve access to local information, but may also create incentives for employees to favor those customers at the organization’s expense. We examine these issues in the context of the banking sector – an ideal setting given its reliance on information and its comparative advantage in gathering and processing data to screen and monitor customers (Hertzberg, Liberti and Paravisini, 2010; Liberti and Mian, 2009).

Over the last decade, we have collected a novel panel dataset on the ethnicity of the manager and the organizational structure of bank branches in Ethiopia to study this issue. We also collect data highlighting a distinctive feature of banking in Ethiopia: banks are strongly associated with specific ethnic groups, as reflected in their leadership and dominant language (Regasa, Fielding and Roberts, 2022). In such contexts, banks operating in areas populated by other ethnic groups must choose between hiring managers of the city’s predominant ethnic group (“city-coethnic”), who are better informed about local borrowers, and less-informed managers coethnic with the bank (“bank-coethnic”), who facilitate better communication about those clients within the bank.

The empirical identification of how banks respond to changes in this information-alignment trade-off is challenging, as it requires variation exogenous to both bank-level and local conditions. To address this, we focus on a source of variation that affects the costs of information acquisition and communication within banks, without directly influencing local conditions. Specifically, we study the effect of banks’ exposure to conflict involving their ethnic group. To separate this effect from local economic conditions, we measure exposure through a bank’s branch network, excluding conflict events in the branch’s own city (Hjort, 2014; Rohner, Thoenig and Zilibotti, 2013; Korovkin and Makarin, 2023).¹ Using a panel of 974 branches operated by 16 banks before and after the onset of the 2020 civil war, we estimate how this network-based exposure reshapes branch organization and lending, controlling for branch and time fixed effects.

To guide our analysis, we develop a model of managerial assignment and delegation building on Dessein (2002) and Alonso, Dessein and Matouschek (2008). The key extension relative

¹ We use data from the Armed Conflict Location and Event Data Project (ACLED) to measure the location, timing, actors and intensity of conflict.

to these frameworks is that the bank jointly chooses both the ethnicity of the branch manager and the authority delegated to that manager. City-coethnic managers may be better able to acquire soft information, but may also be less aligned with headquarters and more prone to in-group favoritism. When ethnic conflict intensifies, this trade-off between information and alignment sharpens. The model yields an unambiguous prediction for delegation: headquarters tightens authority for managers who match the city’s ethnicity. The prediction for manager ethnicity, however, is ambiguous – the optimal adjustment depends on the relative effects of conflict on information acquisition and incentive alignment.

Through a descriptive analysis, we first document a sharp shift in manager ethnicity in cities where the predominant local ethnicity differs from the bank’s dominant ethnic group. In 2018, before the civil war, 77 percent of branch managers in these cities were coethnic with the bank; by 2022, that share had fallen to 36 percent. We then show that this shift is concentrated in branches more exposed, through the bank’s branch network, to ethnic conflict involving the bank’s ethnic group. Greater conflict exposure increases the likelihood that these branches appoint city-coethnic managers, while reducing those managers’ lending autonomy, measured by the largest loan they can approve without headquarters’ approval. This pattern suggests that banks respond to ethnic conflict by relying more on managers who share customers’ ethnicity to acquire local information, while limiting the resulting incentive costs by lowering loan approval limits. Consistent with this interpretation, city-coethnic managers have less autonomy than other managers after the onset of the conflict. Conflict-exposed branches are also more likely to be staffed by experienced managers reassigned from elsewhere in the same bank, suggesting greater reliance on trusted insiders. By contrast, we find no evidence of a change in the choice of manager ethnicity in bank-coethnic cities.

We then examine how these organizational changes affect branch-level lending. In cities not coethnic with the bank, conflict-exposed branches serve a wider geographic area and shift toward fewer, larger loans, with little change in interest or default rates. In cities coethnic with the bank, by contrast, exposed branches expand lending while default rates fall. This suggests lending activity is sustained in both types of city, through different types of adjustments.

We complement the main analysis with a vignette exercise using LLM-generated synthetic bank CEOs (in the spirit of e.g. [Horton, Filippas and Manning \(2023\)](#)). Across branch-year scenarios constructed from our survey data and bank annual reports, we vary the ethnicity of the hypothetical branch manager and the branch network’s exposure to ethnic conflict. The synthetic CEOs mirror the same trade-off highlighted by the model and the data: they view managers who match the city’s population as better able to acquire local information, but also as more prone to favoritism and harder to align with headquarters, leading to tighter delegation when conflict exposure is high. We use this exercise to discipline interpretation of our findings and to open the

organizational black box.

We further corroborate the main findings using an instrument based on banks' pre-conflict proximity to cities historically associated with Beta Israel communities. The migration of Ethiopian Jews from these areas is linked to later disputed border configurations, which in turn predict subsequent exposure to ethnic conflict through the bank's branch network. The resulting estimates support our main organizational and lending results. Finally, we show that the patterns we document are difficult to reconcile with alternative mechanisms, including managers' own safety concerns, customers' preferences for coethnic managers, and employees' preferences for managers who share their ethnicity.

We contribute to three bodies of literature. First, we contribute to the literature on conflict by showing how violent ethnic conflict reshapes the internal organization of firms. Recent work shows that conflict can reorganize economic and social activity well beyond directly exposed markets (Fetzer et al., 2021; Sviatschi, 2022; Melnikov, Schmidt-Padilla and Sviatschi, 2025; Korovkin, Makarin and Miyauchi, 2025), and distort investment and other economic interactions (Fisman et al., 2020; Hjort, 2021). We show that firms also respond by reorganizing internally, changing both who holds authority and how much authority is delegated. We complement Hjort (2014), who studies firms' adjustment of a single incentive margin, by documenting a broader set of organizational responses that help sustain lending under ethnic conflict. Specifically related to the banking industry, our paper joins a growing body of evidence on both the costs and the benefits of matching customers and employees along group lines: for example, the work of Fisman, Paravisini and Vig (2017) and Frame et al. (2025) on the benefits of matching in lending, while D'Acunto, Ghosh and Rossi (2026), Fisman et al. (2020) and Eichengreen and Saka (2025) study how cultural proximity and stereotypes can distort credit allocation.

Second, we contribute to organizational economics by providing an empirical setting to study the trade-off between local information and incentive alignment that is central to theories of delegation (Aghion and Tirole, 1997; Dessein, 2002; Alonso, Dessein and Matouschek, 2008). The existing theoretical literature typically varies the allocation of authority holding the agent fixed, while the assignment literature varies who is appointed holding authority fixed (Xu, Bertrand and Burgess, 2023; Dlugosz et al., 2024). Our setting allows us to study how organizations jointly adjust both margins when external conditions shift. This highlights how organizations actively manage the distortions documented in a recent finance literature: social ties can improve the quality of credit, but cultural proximity and stereotypes can also distort lending decisions (Brock and De Haas, 2023; Rehbein and Rother, 2025).

Third, we contribute to the literature on diversity and economic performance, showing that in polarized environments firms may optimally increase customer-facing diversity while simultaneously tightening internal controls. This highlights an important caveat to a recent literature that

emphasizes the value of in-group homogeneity within firms (e.g., [Espinosa and Delfino, 2024](#); [Spenkuch, Teso and Xu, 2023](#); [Colonnelli, Neto and Teso, 2025](#); [Benson, Board and Meyer-ter Vehn, 2024](#); [Ghosh, 2025](#)), and complements evidence that diversity within organizations can improve performance ([Rasul and Rogger, 2015](#); [Lu, Naik and Teo, 2024](#)). These firm-level adaptations suggest organizations play a role in connecting the macroeconomic literature on the negative link between diversity and economic growth ([Easterly and Levine, 1997](#); [Alesina and La Ferrara, 2005](#); [La Ferrara, 2003](#); [Miguel and Gugerty, 2005](#); [Ashraf and Galor, 2013](#)) and the microeconomic literature on inter-group frictions in economic interactions described above. Our findings also speak to how private organizations, alongside public institutions ([Carlitz et al., 2025](#)), adapt to govern inter-group frictions in divided societies.

The remainder of the paper proceeds as follows. Section 2 presents the theoretical framework and outlines the institutional context. In Section 3, we describe the data, our empirical testing strategy for the theoretical predictions, and the quasi-experimental variation in conflict stemming from the Beta Israel migration. Section 4 then details the empirical model, the main results and the synthetic CEO methodology. Section 5 discusses what alternative mechanisms might explain our results. Finally, we discuss and interpret our findings in Section 6.

2 Theoretical Framework and Institutional Setting

This section models how a bank’s headquarters (HQ) jointly chooses whom to appoint as branch manager and how much authority to grant, when the bank’s dominant ethnic group differs from the predominant group in the branch’s city in the presence of ethnic conflict. Lending decisions rely on soft information, which managers coethnic with the city can more easily acquire due to their cultural proximity with local borrowers ([Fisman, Paravisini and Vig, 2017](#)).² However, a city-coethnic manager may place excess weight on local borrowers’ interests relative to HQ, generating upward bias in lending decisions. By contrast, a bank-coethnic manager’s interests are aligned with HQ’s objectives, thus making lending decisions unbiased, yet she has less access to local soft information. Ethnic conflict shifts this tradeoff: it makes city-coethnic managers more biased towards their own group and worsens the relative ability of bank-coethnic managers to acquire soft information.³

We parameterize this trade-off along three dimensions. First, a bias parameter $b \geq 0$ captures how much the manager’s preferred lending deviates from HQ’s: $b = 0$ for a bank-coethnic manager

² Shared cultural codes, as well as shared first languages, give the officer access to soft information about borrower quality that an out-group branch manager cannot easily obtain.

³ Our framework builds on cheap-talk models of delegation and strategic communication ([Crawford and Sobel, 1982](#); [Dessein, 2002](#); [Alonso, Dessein and Matouschek, 2008](#)) and the banking-organization literature on hierarchical lending and relationship banking ([Stein, 2002](#); [Berger and Udell, 2002](#); [Berger et al., 2005](#); [Liberti and Mian, 2009](#))

and $b > 0$ for a city-coethnic one. Second, a parameter q measuring the precision of the manager's assessment of local project quality: city-coethnic managers have higher q because of their cultural proximity with local borrowers. Third, a safety-related reservation wage, w , capturing the disutility a bank-coethnic manager faces when posted to a city whose dominant ethnic group differs from hers. We denote ethnic conflict by γ , and assume that $b = b(\gamma)$ with $b'(\gamma) > 0$, $q = q(\gamma)$ with $q'(\gamma) < 0$, and finally $w = w(\gamma)$ with $w'(\gamma) > 0$.⁴ These three forces, and how strongly conflict shifts each one of them, jointly determine HQ's optimal managerial appointment and authority allocation. The novel feature of our framework is that HQ optimizes over both margins simultaneously, and that different conflict channels operate on different margins.

Let us consider a lending opportunity of size L and an unobserved state θ representing the efficient (fundamental-based) lending terms the bank should impose to finance such an opportunity. HQ chooses lending terms y and incurs a quadratic loss $[L(y - \theta)]^2$: larger loans amplify the cost of mistakes.⁵

The HQ sets a loan size cutoff, L^* , to choose between two authority regimes. Under *delegation*, the manager chooses y , fully exploiting local information but exposing HQ to biased implementation when $b > 0$. Under *centralization*, HQ retains the decision and chooses y after receiving a cheap-talk report from the manager about θ . When $b > 0$, this report is strategically distorted in the standard sense of Crawford and Sobel (1982): equilibrium communication becomes less informative as bias grows.

The formal model is developed in Appendix A and microfounded in the Online Appendix. The following proposition summarizes its main implications.

Proposition 1. *Let $\Delta(b)$ denote the information lost to strategic communication under centralization, with $\Delta(0) = 0$. Suppose $\Delta(b)$ is strictly increasing and weakly concave in b .*

(i). **Authority allocation.** *There exists a loan size cutoff $L^*(b) = \frac{\Delta(b)}{b^2}$ such that HQ delegates authority on loan decisions to the branch manager if $L \leq L^*(b)$ and centralizes it otherwise. Since $b > 0$ applies only to city-coethnic managers, the loan-size cutoff is relevant only to them. As conflict rises, $b(\gamma)$ increases, lowering L^* . By contrast, bank-coethnic managers are unbiased; thus, HQ is indifferent between delegating and centralizing authority to them.*

(ii). **Managerial appointment.** *HQ appoints a city-coethnic manager when the local information*

⁴ The assumption that a bank-coethnic manager has no bias can be relaxed, and as long as such a manager has a lower bias than a city coethnic manager, all the qualitative results presented throughout our analysis would continue to hold.

⁵ The weighted quadratic loss is microfounded in the Online Appendix. Intuitively, we interpret HQ as seeking to align branch-level lending decisions with the bank's fundamentals-based credit policy. A quadratic loss in the gap between actual and efficient lending terms captures the cost of both excessively loose and excessively tight lending. The L^2 term captures the idea that mistakes on larger loans are disproportionately more consequential and therefore subject to tighter internal scrutiny.

advantage and lower safety costs outweigh the expected costs of bias and communication frictions. Conflict can shift the appointment decision in opposite directions: it reduces the relative value of a city-coethnic manager by increasing $b(\gamma)$ and $\Delta(b(\gamma))$, but it increases their relative values by eroding the ability of bank-coethnic managers to acquire soft information and increasing their safety premium.

The HQ optimizes over both margins simultaneously; the appointment decision determines b , which in turn pins down L^ .*

Proposition 1 shows the impact of conflict on authority allocation and managerial appointment. As conflict increases, ceteris paribus, the HQ would be less willing to delegate loan authority to a city-coethnic branch manager. Moreover, if conflict becomes fiercer, the HQ may prefer to appoint a less-informed but better-aligned bank-coethnic branch manager. Notice that an increase in assessment precision q would only affect the managerial appointment strategy, not the allocation of authority (which, in fact, follows from the decision of whom to appoint as branch manager). Notice that an increase in assessment precision affects managerial appointment but, in the baseline model, does not affect the authority cutoff conditional on manager type. The reason is that baseline information quality enters delegation and centralization symmetrically, whereas the regime comparison is driven by the additional communication loss under centralization and the bias exposure under delegation. The quality of her assessment of θ is the same, irrespective of the authority regime. Similarly, safety concerns for a bank-coethnic manager can shift manager ethnicity, but, by themselves, do not generate a loan size-dependent tightening of authority conditional on manager type.

Finally, throughout our analysis, we examine the case in which HQ and the city have different ethnicities. The case where the bank and the city are coethnic would deliver trivial results in our model. Specifically, the best option for the HQ would be to appoint a branch manager coethnic with both the city and the bank, so as to enjoy the benefits from both interest alignment and better information acquisition.

2.1 Banking in Ethiopia

The Ethiopian banking sector provides an ideal setting to study this mechanism for two reasons. First, Ethiopia is ethnically diverse, yet local areas are homogeneous. Second, banks have strong affiliations with specific ethnic groups, yet operate both in areas where the majority of the population shares their ethnicity and in cities where few people do.

In terms of ethnic diversity, Ethiopia is home to more than 90 ethnic groups, although four – the Oromo (34%), Amhara (30%), Somali (6%), and Tigray (6%) – account for roughly three-quarters of the population. Ethnicity is salient and discernible through appearance, language, and

names (Abbay, 2004). The country’s federal structure, established in 1992 after the fall of the military regime, organizes regions along ethnic lines. As a result, the major regions – including Oromiya, Amhara, Somali, and Tigray – are highly homogeneous.⁶ More broadly, over 85% of Ethiopians live in a *woreda* (district) where a single ethnic group constitutes at least 85% of the population. Appendix Figure D.1 shows ethnic diversity at the local level, and Appendix Figure F.1 maps Ethiopia’s regions, whose names generally align with the predominant ethnicity.

Following liberalization in the early 1990s, privately owned banks entered the market, many with strong ties to specific ethnic groups and regions. These ethnic affiliations are evident in naming conventions, such as the “Cooperative Bank of Oromiya” and “Amhara Bank,” in branch locations (Regasa, Fielding and Roberts, 2022), the ethnicity of C-suite executives, and the predominant language used within banks. Despite these affiliations, banks now operate across ethnic boundaries. As competition intensified, banks established branches well beyond their home regions, often in cities where a different ethnic group predominates. This creates the trade-off our theoretical model formalizes: a bank can hire a city-coethnic manager to acquire better local information, or a bank-coethnic manager to communicate more effectively with headquarters.

2.2 Conflict in Ethiopia

After relative peace and strong economic growth from 2000 to 2020, the Tigray War broke out in late 2020 following a rupture between the federal government and the Tigray People’s Liberation Front (TPLF), the dominant political movement in Tigray. This setting suits our analysis for three reasons. First, conflict intensity varies sharply across time and space, with some areas experiencing severe violence while others remained relatively insulated. Second, violence involved multiple ethnic groups, reducing concerns that our estimates are driven by shocks specific to one group or region. Third, the conflict was unanticipated at the time of our 2018 data collection, supporting the exogeneity of pre-conflict bank and branch characteristics.

The war and subsequent civil conflict caused an estimated 300,000–800,000 deaths and affected much of northern Ethiopia, with fighting concentrated in Tigray and along the north–south corridor linking Mekelle to Addis Ababa. Instability subsequently spread to Oromia (involving the Oromo Liberation Front, OLF) and to Amhara (involving Fano). Figure 1 summarizes conflict intensity over time (Panel A) and space (Panel B) in our data. Panel A shows that fatalities are positive but low and relatively stable during 2005–2019, then rise sharply starting in late 2020, with the number of fatalities peaking in 2021. Panel B maps events from 2019–2022 and indicates that conflict is widely distributed across central and northern Ethiopia, with substantial incidence

⁶ Using the 2007 Ethiopia census microdata (IPUMS), 96% of residents of Tigray are Tigrayan, 91% of residents of Amhara are Amhara, and 88% of residents of Oromiya are Oromo.

in densely populated areas.⁷

The conflict would have been difficult to foresee when we collected our data in 2018. A new prime minister had only just assumed power that year, beginning a political transition that culminated in the exclusion of the TPLF from the ruling coalition in late 2019. The exclusion left the TPLF with substantial military capacity but diminished political power, creating conditions conducive to conflict (Morelli, Ogliari and Hong, 2024). Because our data collection predates these developments, pre-conflict branch and manager attributes are unlikely to reflect anticipation of the violence. We exploit this timing in our empirical strategy.

3 Data and empirical strategy

3.1 Data

For our analysis, we combine two main datasets with several complementary sources described below. The first is a novel branch-level panel covering the period before (2018) and after (2022) the onset of civil war in Ethiopia. The second is the Armed Conflict Location & Event Data Project (ACLED), which records the location, date, actors, and fatalities of conflict events.

In 2015, we constructed a list of the population of around 4,000 bank branches in Ethiopia at that time – our initial sampling frame. We successfully interviewed 1,851 by 2018, our first period, and successfully re-interviewed 974 branches of 16 banks across 187 cities in 2022, our second period. Our main analysis sample consists of the 974 branches that were interviewed in both waves.⁸ For each branch, we conduct the interview with the most senior manager present at the branch at the time of the survey. The questionnaire covers three areas. First, we ask a series of questions about the manager’s characteristics including their age, work experience and education. Second, we implement a questionnaire we developed based on the World Management Survey (Bloom and Van Reenen, 2007), customised to reflect bank operations and lending activities, and questions on branch organization.⁹ Finally, we ask a series of questions about lending at the branch, including on the volume of lending, interest rates, collateral, non-performing loans, and the degree of autonomy the manager has to make lending decisions.

⁷ Online Appendix Figure F.2 shows the geographic distribution by year, with concentration in the north in 2020–2021 and new hotspots in other regions thereafter.

⁸ Appendix Table G.2 examines attrition between the 2018 and 2022 survey waves. Attrition is largely unrelated to changes in conflict exposure in non-bank-coethnic cities, which are the observations that drive our identification. By contrast, in bank-coethnic cities, higher conflict exposure is associated with slightly greater attrition, mainly because branches are more likely to have closed. We therefore do not think attrition is likely to substantially bias our main results. This Online Appendix section also provides further detail on sample construction and cleaning steps.

⁹ These management practices questions are the subject of a separate paper.

As ethnicity is highly salient in Ethiopia, we infer each manager’s ethnic group based on the interview. To do so, two interviewers – the primary interviewer and an observer – jointly determine ethnicity based on the manager’s region of birth, accent, spoken languages, and name. Online Appendix Table D.3 reports the distribution of manager ethnicities for 2018 and 2022. For 259 managers in 2022, our enumerators did not transcribe the ethnicity. For these managers, we infer their ethnicity based on (a) the managers’ ethnicity in 2018 if they were already in the branch at the time (20 managers), or (b) the managers’ place of birth (239 managers), Online Appendix Table I provides details on this imputation, and shows that whether the variable is missing is unrelated to conflict and that the results are robust to omitting the imputed ethnicity.

Table 1 presents summary statistics for the main variables. Online Appendix Tables E.2 and E.3 report descriptive statistics for branches’ organizational characteristics and lending activities by survey wave, respectively. Online Appendix F provides further details on survey design and implementation.

We use ACLED to measure the spatial intensity of ethnic conflict in Ethiopia. ACLED records the date, location (latitude/longitude), actors, and reported fatalities of events. To link events to ethnic groups, we use the actors listed in each event together with the Ethiopia Peace Observatory’s actor–ethnicity classifications.¹⁰ Throughout the paper, we keep all ACLED event types but restrict attention to events with at least one reported fatality, and measure conflict intensity using reported fatalities. This focuses on high-severity incidents and reduces sensitivity to cross-area differences in the reporting of low-intensity episodes. ACLED also cautions that fatality figures are measured with error,¹¹ therefore, in Online Appendix D, we show robustness to using the number of fatal events instead of fatality counts.¹²

We also identify the ethnic affiliation of banks and cities. Ethiopian naming conventions – typically a personal name followed by the father’s personal name, with no surnames – make it possible to infer ethnicity from publicly available records (Gebre, 2010; Fessha, 2016; Kefale, Kamusella and Van der Beken, 2021). We classify each bank by the ethnicity of its CEO and board members, assigning it to the ethnic group that holds the majority of board seats. We classify cities by their predominant ethnic group using the Murdock Ethnographic Atlas. Together with the manager-level data from our survey, this allows us to measure the ethnicity of banks, branch

¹⁰ The Ethiopia Peace Observatory is a special project run by ACLED.

¹¹ See (Armed Conflict Location & Event Data Project sourcing, 2024; Armed Conflict Location & Event Data Project fatalities, 2024).

¹² We use the ACLED Ethiopia extract downloaded on 15 May 2024 (and the Ethiopia Peace Observatory actor–ethnicity classifications accessed on 5 March 2025); we archive the extract used for analysis.

managers, and cities. Online Appendix E reports their distribution.¹³

3.2 Defining network-level exposure to conflict

Using ACLED, we construct two measures of conflict exposure for each branch: *local* exposure to violence near the branch’s own city, and *network* exposure to violence involving the bank’s ethnic group near other branches in its network, yet sufficiently far from the branch itself. We use the latter as our main measure of exposure to ethnic conflict.

We introduce the following notation. Let $\mathcal{E}_t$ denote the set of ACLED conflict events in period t , with f_e fatalities in event $e \in \mathcal{E}_t$. For bank b , let $G_{be} \equiv \mathbf{1}\{e \text{ involves bank } b\text{'s ethnic group}\}$. Let $\mathcal{C}_b$ be the set of cities in which bank b operates branches in 2018 (the pre-conflict network), with $C_b \equiv |\mathcal{C}_b|$, and let $c(i)$ denote branch i ’s city. For any city or set of cities S , let $d(S, e)$ denote the distance in kilometers from event e to the nearest city in S .

For branch i of bank b in period t , we define:

$$(1) \quad \text{NetworkExposure}_{ibt} = \frac{1}{C_b - 1} \sum_{e \in \mathcal{E}_t} \underbrace{G_{be} f_e}_{\text{Fatalities from conflict involving bank } b\text{'s ethnicity}} \times \underbrace{\mathbf{1}\{d(\mathcal{C}_b, e) < 20\}}_{\text{A branch city of bank } b \text{ is within 20km of event } e} \times \underbrace{\mathbf{1}\{d(c(i), e) > 20\}}_{\text{Branch } i\text{'s city is more than 20km from event } e}.$$

Intuitively, the measure captures the number of fatalities from own-ethnicity conflict events that occur near at least one branch of bank b , but not near branch i , normalized by the number of other cities in which the bank has branches ($C_b - 1$). To match our two-period panel, we assign ACLED events from 2015–2018 to period 1 and events from 2019–2022 to period 2.¹⁴

Figure 4 shows the distribution of our network conflict exposure measure for period 1 leading up to our first survey, 2015–2018, and for period 2 between our surveys, 2019–2022. In 2015–2018, most banks experienced fewer than five conflict-related fatalities per branch, with occasional outliers around 20 fatalities. In 2019–2022, exposure increased sharply, with peaks over forty and an average of approximately 18 per branch. This shows a sharp increase in banks’ exposure to ethnic conflict between the first and second wave of our panel.

We interpret $\text{NetworkExposure}_{ibt}$ primarily as a shock to bank b ’s employees and senior management, rather than as local disruption in branch i ’s market. A large literature emphasizes that conflict can increase the salience of group identity and alter beliefs about intergroup risk

¹³ We treat Harari as Oromo because the vast majority of Harari’s population is Oromo. See Online Appendix E for details. We also aggregate ethnolinguistically distinct groups from Ethiopia’s former SNNP region into a single category because they are individually too small in our sample to support separate classifications, and because they shared a common regional administrative structure. The results are robust to excluding this category.

¹⁴ In Appendix D we test robustness to this distance cutoff, to alternative measures of conflict intensity (fatality counts vs. number of fatal events), and to using the 2022 branch network instead of the 2018 network.

(Akerlof and Kranton, 2000; Rohner, Thoenig and Zilibotti, 2013). In organizational settings, such identity-linked updating can affect the behaviour of decision-makers, including credit officers and branch managers, and thereby shift lending along group lines (Fisman et al., 2020). Because $\text{NetworkExposure}_{ibt}$ excludes events within 20km of branch i 's city, the variation we exploit is unlikely to be driven by contemporaneous local insecurity or local demand shocks at branch i . Instead, it captures how violence involving a bank's own ethnic group elsewhere in its network can shift ethnic salience – and behaviour – among its personnel.

Additionally, to capture local conflict through the variable defined for branch i in city c , we define:

$$(2) \quad \text{LocalExposure}_{it} = \sum_{e \in \mathcal{E}_t} \underbrace{f_e}_{\text{Fatalities in event } e} \times \underbrace{\mathbf{1}\{d(c(i), e) < 20\}}_{\text{Event } e \text{ occurs within 20km of branch } i\text{'s city}} .$$

This measure aims to directly capture the local economic effects of conflict.

3.3 Quasi-experimental variation in conflict

Much of the Amhara-Tigray conflict captured by our network exposure measures concentrates along a stretch of the regional border between these regions, whose disputed status reflects a specific historical episode. The Beta Israel, commonly known as Ethiopian Jews, experienced significant migration to Israel during the 1980s and early 1990s. This movement was marked by notable operations such as Operation Moses in 1984 and Operation Solomon in 1991, where tens of thousands were airlifted to Israel. This sudden shock plausibly resulted in contentious borders drawn in 1992, providing a separate source of conflict in the 2020 civil war. We use these cities to construct an instrument for network-level exposure to conflict in subsection 4.5; here we outline the data and its link to modern-day conflict.

The most recent shifts prior to the 2020 conflict in the Amhara-Tigray border took place in 1992, when Ethiopia's ethnographic regional boundaries were drawn following the fall of the military regime. During these negotiations, dominated by the Tigray People's Liberation Front (TPLF), the border was drawn relatively far south towards Amhara, encompassing part of the area recently vacated by 40,000 Beta Israel (Nyssen and Demissie, 2023). In recent years, these disputed borders have continued to fuel tensions. The exclusion of the TPLF from Ethiopia's governing coalition in 2019 brought these long-standing grievances to the surface. The contested borders played a key role in the Amhara regional army's involvement in the Tigray conflict. The borders also fueled the continuing civil war, involving Amhara militias, who feared that territory they had gained might be returned to Tigray as part of a peace agreement (Nyssen and Demissie,

2023). These 1992 borders thus concentrated disputed territories around the former Beta Israel settlements, which later became focal points of interethnic conflict.

To study these cities, we extract data on the location of the main cities from which the Beta Israel departed (Kaplan, 1992). We then match this to bank branches and banks using the cities in which they are located. We extend the area we consider as Beta Israel to include all cities within 100 kilometers of this area. In subsection 4.5, we define Beta Israel Exposure, our instrument, as the share of bank b 's branches within 100 km of any Beta-Israel origin city.

3.4 Descriptive results

Before our main empirical analysis, we begin by documenting how manager ethnicity changed from 2018 to 2022, separately for bank-coethnic and non bank-coethnic cities. Using the branch-level panel observed in 2018 and 2022, we compare changes over time between branches located in cities that are coethnic with the bank and branches in cities that are not. Concretely, we estimate a fully interacted two-by-two specification with indicators for (i) the 2022 wave, (ii) whether the branch is in a non bank-coethnic city, and (iii) their interaction; we report the implied group-by-year means in Figure 2. We run this analysis separately for two outcomes: (a) whether the manager shares their ethnicity with the city and (b) whether the manager shares their ethnicity with the bank.

Figure 2 shows that banks shifted from hiring bank-coethnic managers toward city-coethnic managers between 2018 and 2022. This shift is particularly pronounced in cities that are not coethnic with the bank. One interpretation, consistent with our framework, is that matching managers to local customers became more valuable relative to matching them to the bank; however, these descriptive patterns alone cannot distinguish that mechanism from alternative explanations. The remainder of this section therefore focuses on identifying the causal effect of exposure to ethnic conflict on branch-level organization.

4 Empirical model and results

Our model predicts that ethnic conflict changes whether banks assign managers coethnic with the bank or with the city, but only in non bank-coethnic cities – where the bank's ethnicity differs from the local population's. Our main analysis therefore focuses on these branches, using branches in bank-coethnic cities as a placebo. Because these branches predominantly serve customers who share the bank's ethnicity, conflict polarizing differences between groups should not affect them. Comparing the two groups nets out any bank-wide responses to conflict that are unrelated to the ethnicity of local customers.

We first show that conflict exposure shifts branches in non bank-coethnic cities from bank-

coethnic managers to city-coethnic managers. We then examine two complementary organizational adjustments: reducing managers' lending authority and reassigning experienced insiders. Next, we show that branches in non bank-coethnic cities make relatively limited adjustments to lending. We then use a synthetic bank CEO to investigate the underlying mechanisms. Finally, we validate the main results using banks' proximity to Beta-Israel cities as an instrument.

In our main specification, we estimate a two-way fixed-effects model to examine how within-branch changes in exposure to ethnic conflict through the bank network affect branch-level outcomes.¹⁵ We consider a balanced panel conditional on re-interview¹⁶ over two time periods $t \in \{1, 2\}$ for branches indexed by $i \in \{1, \dots, N\}$. These branches are located in cities $c \in \{1, \dots, C\}$, and are part of banks $b \in \{1, \dots, B\}$.

$$(3) \quad Y_{itbc} = \beta_1 \log(\text{NetworkExposure}_{itb}) + \phi_i + \lambda_t + \varepsilon_{itbc},$$

where Y_{itbc} is a branch-level outcome such as manager ethnicity or management practices. We include branch (ϕ_i) and time (λ_t) fixed effects and cluster standard errors at the branch level.^{17,18}

This specification identifies the causal effect of network exposure to ethnic conflict under two conditions. First, changes in a branch's network exposure are plausibly exogenous if the spatial intensity of conflict was not predictable in 2018 and banks did not locate branches in anticipation of future conflict. To probe this assumption, we implement an alternative design that uses the proximity of banks' pre-2018 branch networks to Beta-Israel cities as a source of quasi-exogenous variation in exposure that was difficult to foresee in 2018. We also construct the bank network using all branches interviewed in 2018, so that post-2018 branch closures do not mechanically affect measured exposure. Second, Equation 3 recovers β_1 if no other time-varying factors jointly drive network exposure and branch organization. Branch fixed effects absorb time-invariant differences across branches, so identification requires that remaining shocks are common across branches (captured by time fixed effects) or otherwise orthogonal to changes in network exposure. A key threat is differential local trends in the cities where highly exposed banks operate; we assess this by controlling for local conflict intensity and including city-time fixed effects.¹⁹

¹⁵ Because we have two periods, this is equivalent to a first-difference specification, avoiding concerns about negative weights in staggered-adoption settings (Callaway and Sant'Anna, 2021).

¹⁶ In 2022, we re-interviewed 974 of the original 1,851 branches. In cities not coethnic with the bank, attrition is not predicted by the change in network-level exposure to ethnic conflict (see Appendix H.2 for details). We therefore treat this as a balanced panel.

¹⁷ We add 0.01 to `NetworkExposure` to deal with potential zero values, and show the main results are robust to using an inverse hyperbolic sine transformation in Online Appendix Section D.3

¹⁸ We have also implemented wild-bootstrap inference (Cameron, Gelbach and Miller, 2008) for the analyses in this section; these results are reported in Online Appendix C. This more conservative approach only affects the statistical significance of the already less precise effects related to lending, and cross-sectional results on manager reallocation.

¹⁹ Specifically, we re-estimate 3 with city-time fixed effects ($\lambda_{c,t}$) and controlling for the intensity of local conflict. $Y_{itbc} = \beta_1 \log(\text{NetworkExposure}_{itb}) + \beta_2 \log(\text{local_conflict}_{itb}) + \phi_i + \lambda_{c,t} + \varepsilon_{itbc},$

Finally, to test formally whether bank-level exposure to conflict affects branches in bank-coethnic and non bank-coethnic cities differently, we pool both groups and estimate the following interaction specification:

$$(4) \quad Y_{itbc} = \beta_1 \log(\text{NetworkExposure})_{itb} + \beta_2 \log(\text{NetworkExposure})_{itb} \cdot \text{I}[\text{non_bank_city_coethnic}]_{bc} + \phi_i + \lambda_{t,\text{CoethnicCity}} + \varepsilon_{itbc},$$

The bank-coethnic $\times$ time fixed effects ($\lambda_{t,\text{CoethnicCity}}$) allow separate time shocks for branches in bank-coethnic and non bank-coethnic cities, so β_1 captures the effect of conflict in bank-coethnic cities alone. Throughout the results section, we report the p -value for $\beta_2 = 0$: the null that conflict exposure affects branches in bank-coethnic and non bank-coethnic cities equally.

4.1 Ethnic Conflict and Manager Ethnicity

Figure 2 showed that between 2018 and 2022, banks shifted from hiring managers coethnic with the bank to hiring managers coethnic with the city. To test whether this shift is driven by exposure to violent ethnic conflict through the branch network, we estimate equation 3 using indicators for whether the manager is coethnic with the bank or with the city as outcomes.

We find that network-level exposure to ethnic conflict shifts banks toward hiring city- rather than bank-coethnic managers, but *only* when the bank and city’s dominant ethnicity differs. As shown in Table 2, branches in cities not coethnic with the bank become 9.2 percentage points (p.p.) more likely to hire a city-coethnic manager, a 50.3% increase over the 2018 mean of 18.3%, in response to a one-standard-deviation increase in ethnic conflict exposure through the branch network. Correspondingly, these branches become 15.1 p.p. less likely to hire a bank-coethnic manager, a 19.6% drop from the 2018 mean of 77.2%. The additional specifications in Table 2 show that this result is robust to either adding city-time fixed effects or controlling for local conflict intensity. In contrast, for branches in cities coethnic with the bank we do not reject the null of no effect of exposure to ethnic conflict. Moreover, we find that the effect is significantly *different* between these cities and cities not coethnic with the bank.

We also show, in Online Appendix Tables C.2, C.3, C.4 and C.5 that the results are also robust to varying the conflict-matching radius (15 or 25 km), excluding the state-owned bank (CBE), and excluding Addis Ababa branches.²⁰ In Online Appendix D.3, we return to the main specification, but instead use an inverse hyperbolic sine transformation to show the results do not depend on the log transformation (Chen and Roth, 2024). Finally, we re-run our main specification in 3

²⁰ For the last robustness check, we still include Addis Ababa in our calculation of our measure of network-level conflict exposure.

dropping each individual ethnic group from the sample in Appendix Table C.1. Results are fully robust to this for branches in a city not coethnic with the bank, although the difference between bank-coethnic and non bank-coethnic cities is not significant when we drop all branches of Amhara banks.

4.2 Organizational adjustments to manager ethnicity

Banks thus shift to hiring city-coethnic branch managers in response to exposure to ethnic conflict. Based on our model, this suggests that the frictions in information acquisition, q , respond more strongly to conflict than the incentive cost, b . Two features of the banking environment may drive these relative magnitudes. First, banks' internal communication can reduce reliance on soft information, thus reducing the importance of misaligned incentives. Second, banks can use organizational adjustments to mitigate the incentive issues associated with employing city-coethnic managers, including – as in our model – by reducing delegation, or – beyond our model – by hiring managers with whom they have a longer-term relationship.

Our theoretical model implies that managers coethnic with the city they work in should get less autonomy to make lending decisions, and that an increase in the bias b should further reduce this autonomy. We measure delegation in our survey as the largest loan a branch manager can approve without the headquarters approval. We test this model hypothesis as follows. First, we implement equation 3 using this delegation variable as the dependent variable. Next, to assess whether delegation differs systematically for branches with city-coethnic managers, we estimate:

$$(5) \quad \text{largest_loan}_{itbc} = \beta_1 \text{manager_city_coethnic}_{itb} + \gamma_i + \phi_t + \varepsilon_{itbc},$$

using $\text{manager_city_coethnic}_{itb}$ as the independent variable to test whether banks assign different levels of autonomy to managers of different ethnic groups.

Table 3 reports the results. Panel A shows that in non bank-coethnic cities, greater exposure to ethnic conflict reduces the size of the largest loan a branch manager can approve. In bank-coethnic cities, the estimated effect is similar in sign but statistically insignificant. Panel B in Table 3 shows that banks give less autonomy – lower loan-approval limits – to city-coethnic managers, consistent with banks limiting the incentive costs of employing them. This effect is more pronounced in the second period, when conflict intensity is higher, suggesting that banks tighten delegation as the incentive risk grows.

The second organizational response concerns the type of managers banks select. Specifically, we ask whether they are reallocated within the bank or newly hired, and how their experience compares with other managers. Because conflict induces branches to appoint city-coethnic managers, understanding whether these managers are redeployed insiders or external hires speaks directly to

whether the relevant mechanism to these changes in managers' ethnicity relates primarily to the alignment of incentives, to information acquisition or to safety concerns.

To study the source of new managers, we use the 2022 cross-section of our survey. We define four variables: (i) a dummy indicating whether the manager joined the bank after the outbreak of conflict (in 2021 or 2022); (ii) a dummy for whether the manager joined the branch after the outbreak of the conflict (in 2021 or 2022); (iii) a `reallocated manager` indicator equal to one if the manager joined the branch after but the bank before the outbreak of the conflict; and (iv) a `new manager` indicator equal to one if the manager joined both the branch and the bank after the outbreak of the conflict (and did not change branch since). We cannot identify promotion timing directly, since we only observe employment duration at the branch and bank, not the year of managerial appointment. We then estimate the following descriptive cross-sectional model:

$$(6) \quad Y_{ibc} = \beta_1 \log(\text{NetworkExposure}_{ib}) + \varepsilon_{ibc},$$

We cluster standard errors at the branch level. We find that, in non bank-coethnic cities, a one-SD increase in log conflict exposure is associated with an increase in the probability of employing a reallocated manager of about 6.3 percentage points (Table 4). In bank-coethnic cities, branches instead tend to hire managers who are entirely new to the bank. This pattern is consistent with a strategy in which banks limit potential lending bias by assigning non bank-coethnic managers with whom they already have a pre-existing institutional relationship.

Finally, we examine the characteristics of these managers. We construct a short manager profile including their tenure at the bank, tenure at the branch, age, education, and gender. Using our panel, we re-estimate specification 3 for each characteristic separately for bank-coethnic and non bank-coethnic cities. Table 5 shows that, in non bank-coethnic cities, conflict exposure is associated with appointing managers who have longer tenure at the bank but not at the branch, and who are older. We find no conflict-driven change in education – presumably as 98.7% of managers hold university degrees – and a small, insignificant change in gender composition.

Taken together, these results show that branches exposed to conflict through the bank network shift to hiring city-coethnic managers, but take two steps to address the associated incentive costs: they reduce the lending authority delegated to these managers, and reassign experienced insiders with long-term institutional relationships rather than hiring externally. This pattern is difficult to reconcile with managers themselves demanding transfers to cities affiliated with their ethnic group, since banks would then have little reason to make these complementary adjustments. Instead, the results are consistent with banks actively managing the tradeoff between information acquisition and incentive alignment predicted by our model.

4.3 Branch-level lending activities

We next examine how network-level exposure to ethnic conflict affects branch-level lending and operations. Table 7 reports estimates from specification 3 for a range of outcomes related to credit supply and branch activities.

We begin with branches’ operational radius, defined as the geographic area from which they attract customers. Branches in bank-coethnic cities experience a sizable contraction in this radius, whereas branches in non bank-coethnic cities expand their reach. One interpretation, consistent with classic work on soft versus hard information in lending (Petersen and Rajan, 2002; Agarwal and Hauswald, 2010), is that conflict exposure pushes branches in bank-coethnic cities toward more relationship-based screening within local networks, concentrating activity among nearby borrowers. By contrast, in non bank-coethnic cities, where branches increasingly appoint city-coethnic managers, lending may rely relatively more on harder, more verifiable information, which can support serving borrowers over a wider area.²¹

Turning to credit supply, branches in non bank-coethnic cities issue fewer but larger loans in response to conflict exposure. This pattern is consistent with credit being concentrated among a smaller set of safer or better-known borrowers, reducing reliance on softer information. In these branches, we do not detect meaningful changes in either lending rates or default rates, and a small decrease in the required collateral. In contrast, branches in bank-coethnic cities expand overall average loan size while also lowering default rates.

These lending patterns complement the organizational adjustments documented above. In non bank-coethnic cities, the shift toward city-coethnic managers appears to ease customer-facing inter-ethnic information frictions, but not completely: branches still reduce the lending among the extensive margin while concentrating credit among fewer borrowers. In bank-coethnic cities, where customer-facing inter-ethnic frictions are less central, we interpret these bank-wide adjustments as responses to a more volatile environment, rather than changes driven by the ethnicity of local customers.

4.4 Exploring the mechanisms with Synthetic CEOs

Our model implies that the information-incentive trade-off, especially through delegation, is the central mechanism linking conflict to organizational adjustment. The reduced-form evidence is consistent with this, but cannot decompose the trade-off into its constituent channels. To do so, we run a vignette experiment with LLM-generated synthetic bank CEOs, varying (i) the ethnicity of the hypothetical branch manager and (ii) network-level conflict exposure. We use LLMs

²¹ In the 2022 cross-section, city-coethnic managers report a larger operational radius than bank-coethnic managers in non bank-coethnic cities.

as synthetic economic agents (Horton, Filippas and Manning, 2023) to address two limitations of standard approaches. The mechanisms of interest, information acquisition and transmission, alignment with headquarters, and ethnic favoritism, are difficult to observe and measure directly. Relatedly, direct surveys of bank executives are poorly suited to eliciting sensitive beliefs about ethnicity. As Ludwig, Mullainathan and Rambachan (2025) note, LLMs can therefore be useful for structured mechanism exploration.²²

Figure 5 summarizes the design; Appendix K provides full details. We construct vignettes from observed branch-year cells, each combining the bank’s and city’s ethnic affiliations, conflict exposure, and a GPT-5-generated summary of the bank’s annual report (Bybee, 2025; Fernández-Fuertes, 2025). For each branch-year, we compare a city-coethnic and a bank-coethnic manager under low and high network conflict (10th and 90th percentiles), repeated for 2018 and 2022. We elicit the synthetic CEO’s assessment of each manager along four dimensions: information acquisition, information transmission, coethnic favoritism, and safety concerns.²³ We then ask about their preferred organizational design (delegation, wages) and expected lending outcomes. We estimate LLM-implied conditional average treatment effects using the saturated specification: (7)

$$y_{itv} = \beta_1 \text{CityCoethnic}_{itv} + \beta_2 \text{HighConflict}_{itv} + \beta_3 (\text{CityCoethnic}_{itv} \times \text{HighConflict}_{itv}) + \phi_i + \lambda_t + \varepsilon_{itv},$$

where i indexes branches, t years, and v vignette evaluations. CityCoethnic is an indicator for the manager and city being coethnic and HighConflict an indicator for being assigned the high conflict condition.²⁴ ϕ_i and λ_t are branch and time fixed effects respectively.

Table 6 reports the results. City-coethnic managers are perceived as better at acquiring local information but worse at transmitting it to headquarters, more prone to coethnic favoritism, and have fewer safety concerns. These assessments translate into organizational choices: city-coethnic managers receive less delegation and lower wage premia, and are expected to generate higher lending volumes but worse loan quality. Higher conflict exposure weakens information acquisition for bank-coethnic managers and information transmission for city-coethnic managers, while increasing favoritism and safety concerns for both. Conflict reduces delegation and lending for both manager types, with a larger lending decline for city-coethnic managers. The vignette evidence thus decomposes the model’s central trade-off into specific channels and mirrors the main reduced-form patterns in the data.

²² Importantly, the version of GPT-5 used in this exercise has a training cutoff that predates the first public circulation of this paper, so the model’s responses cannot reflect exposure to our specific framework, hypotheses, or results.

²³ On the latter, we specifically ask about safety concerns, since a manager who is not coethnic with the local population may require a higher wage to induce them to live and work in that city when ethnic conflict intensifies, raising the bank’s cost of assigning them there.

²⁴ HighConflict is demeaned so that β_1 captures the average city-coethnic effect across conflict levels rather than the effect at low conflict only.

A natural concern is domain mismatch: Ethiopian banking may differ from the contexts most represented in LLM training data (Sarstedt et al., 2024), so the magnitudes should be interpreted with caution. Nevertheless, the qualitative alignment between the vignette results, the model, and the reduced-form evidence suggests that our interpretation reflects general economic forces rather than Ethiopia-specific norms alone.

4.5 Robustness using exposure to Beta Israel Cities

Our `NetworkExposure` measure, combined with branch and time fixed effects, identifies the causal effect of conflict under two conditions. First, branches’ network-level exposure to ethnic conflict is exogenous if both the spatial intensity of conflict was not predictable in 2018 and banks did not choose the locations of their branches in anticipation of future conflict. Second, although branch fixed effects absorb time-invariant branch characteristics, identification still requires that time-varying shocks to branch outcomes are either common across branches (captured by time fixed effects) or orthogonal to changes in network conflict exposure. In particular, the results should not be driven by differential local trends in the cities where highly exposed banks operate; we already test this assumption by controlling for local conflict and by including city-time fixed effects.

To validate our baseline results, we exploit predetermined variation in banks’ exposure to areas around historically significant Beta Israel cities, which became disproportionately prone to ethnic conflict after the decline of Tigrayan influence in the federal government (Section 3). For each bank b , we compute the share of its branch network in 2018 located within 100 km of a Beta Israel city,

$$\text{share_branch_Beta_100}_b = \frac{1}{N_b} \sum_{i \in \mathcal{I}_b} \mathbf{1}\{\text{dist}(i, \text{BetaIsrael}) \leq 100 \text{ km}\},$$

and construct a time-varying exposure measure

$$Z_{bt} = \text{share_branch_Beta_100}_b \times \mathbf{1}\{t = 2022\}.$$

We then report reduced-form estimates using Z_{bt} in place of $\log(\text{NetworkExposure}_{itb})$. Figure 3 describes the location of the Beta-Israel cities and this exposure measure visually.

This provides a useful validation exercise for several reasons. First, because it is based on banks’ pre-conflict branch networks, the variation in Z_{bt} is predetermined with respect to the organizational changes we study. Second, the historical relevance of Beta Israel cities for the later Amhara–Tigray border dispute implies that this measure captures exposure to a historically specific component of ethnic conflict, rather than broad nationwide instability. Third, because this strategy

relies on pre-2018 network geography, it helps address the concern that our baseline results might reflect endogenous changes in branch location or other contemporaneous bank responses to the conflict. We therefore interpret this exercise as providing an alternative source of variation with which to assess whether the main patterns in the data are robust.

Table 8 presents the results for managers’ ethnicity, delegation and other manager characteristics. Consistent with our baseline estimates, we find no significant effects in bank-coethnic cities, except a decrease of managers in their tenure in the branch. In contrast, in non bank-coethnic cities, variation in the share of branches near Beta-Israel cities leads to a marked decline in the probability of appointing a bank-coethnic manager and a corresponding rise in the probability of appointing a city-coethnic manager. These results reinforce our main finding that banks increasingly rely on locally coethnic managers when exposed to higher conflict risk. These estimates also qualitatively confirm the reduction in delegation, and that these managers tend to have longer tenure within the bank and are, on average, older.

Table 9 reports the corresponding results for branch-level lending. The pattern mirrors that in our baseline specification. In bank-coethnic cities, exposure to Beta Israel cities is associated with larger average loan sizes, higher collateral requirements, and lower default rates—consistent with a shift toward safer, collateral-backed lending. In non bank-coethnic cities, banks expand their operational radius and start providing larger loans. Although the total number of loans and lending rates are not significantly affected, the estimates suggest a contraction in lending intensity outside bank-coethnic markets.

5 Mechanism tests

In interpreting our empirical results, we have so far focused on the branch manager’s role in the loan application process. However, branch managers perform multiple functions within the organization: They also supervise employees and attract customers to the branch. Moreover, ethnic conflict may directly affect a manager’s preferences and reservation wage for living in cities with a different predominant ethnicity. We examine these three alternative channels in turn: (i) managers’ own location preferences, (ii) customers’ preferences for banks and managers that share their ethnicity, and (iii) frictions with local employees.

Managers’ willingness to live in cities whose predominant ethnicity differs from their own could plausibly be affected by the intensity of ethnic conflict, whether due to local insecurity or a desire to return to one’s hometown. If so, the changes in managerial composition we document would reflect individual relocation decisions rather than bank-level optimization. Ethiopian banks are highly hierarchical, and personnel assignments – including branch manager postings – are typically decided at headquarters with limited scope for voluntary transfers, making this interpretation

less likely *a priori*. On the other hand, our measure of network-level exposure to conflict, though constructed to abstract from local conflict intensity, is positively correlated with it, making safety concerns a plausible concern.

We run several tests against this alternative. First, our main estimates (Table 2) remain robust to city–time fixed effects and direct controls for local conflict intensity. If fear of local conflict were the primary driver, these controls should substantially attenuate our coefficients; they do not. This implies that two branches operating in the same city – both non-coethnic with the local population – make different managerial choices because of their differential exposure to conflict involving their own ethnic group elsewhere in the network. Consistent with this, Appendix Table C.6 shows that neither the probability a manager is locally born nor the share of local employees increases with network-level conflict exposure — if anything, both decline, though the estimates are imprecise. If managers were relocating for personal safety, we would expect the opposite.

A sharper version of this concern is that conflict threatens managers of the bank’s ethnicity specifically, so that city-level controls miss the relevant variation. We address this by controlling directly for local conflict involving the bank’s own ethnic group (Table I.1). Our results are robust; if anything, higher local conflict involving the bank’s ethnic group slightly increases the probability of appointing a bank-coethnic manager, the opposite of what personal security concerns would predict. A related worry is that network-level conflict heightens managers’ perceived risk of being targeted, even absent local threats. But when we redefine exposure to include only events involving both the bank’s and the city’s ethnic groups (Figure I.1), we obtain smaller coefficients; the bank-coethnic coefficient becomes insignificant, and the city-coethnic coefficient is substantially attenuated (to roughly half its main-specification magnitude). If perceived ethnic targeting were the dominant mechanism, this measure should strengthen the relationship; instead it weakens it. Together, these tests suggest that the reallocation patterns we document reflect organizational decisions rather than individual responses to security concerns.

A second concern is that conflict erodes customers’ trust in managers who do not share their ethnicity, shifting demand for credit and forcing banks to adjust staffing. If so, the effect should be strongest where customers have a salient outside option: a branch of a bank-coethnic with the local population. We test this directly by interacting conflict exposure with the presence of a city-coethnic competitor bank. Table I.2 shows no significant difference. Results are similar when we instead measure competition by the number of branches in the city or by managers’ perceived number of competitors in 2018.

If customer trust were the primary channel, banks facing coethnic competitors coethnic with the city should have the strongest incentive to adjust their staffing in response to conflict. The absence of such heterogeneity suggests that the changes we document were driven by internal organizational considerations rather than shifts in customer demand.

Finally, branch managers do not only communicate with headquarters — they also supervise local employees. Conflict may therefore affect not only upward communication but also the manager’s ability to motivate and coordinate subordinates. [Li et al. \(2025\)](#) formalize a version of this idea: in a three-layer hierarchy, a middle manager must be trusted by both the principal above and the agents below. A manager too aligned with the top does not motivate workers to exert effort; one too aligned with workers is discounted by headquarters. When conflict sharpens ethnic loyalties, a bank-coethnic manager may become too closely identified with headquarters, and a city-coethnic manager too closely identified with local staff. A manager coethnic with neither side may then be better positioned to sustain cooperation in both directions. If this channel were important, conflict should increase the probability that branches are run by neither-coethnic managers, especially where the share of local employees is high.

We find some support for the first prediction. [Table I.3](#) shows that a one-standard-deviation increase in conflict exposure raises the probability of appointing a neither-coethnic manager by about 5.9 percentage points, significant at the 1 percent level. However, [Table I.4](#) shows that this effect is only slightly larger in branches with a higher baseline share of local employees, and the difference is statistically insignificant. These results suggest that the employee-supervision channel may complement our main mechanism, but is unlikely to be the dominant driver. If it were, the effect should concentrate in branches where manager-employee alignment matters most – those with many local staff. It does not. This mechanism would also not be predicted to result in the change in delegation we report.

6 Discussion

This paper shows that ethnic conflict changes not only market outcomes but also the internal organization of firms. Using new branch-level data from Ethiopian banks, we find that greater conflict exposure leads branches in non-coethnic cities to appoint managers who are coethnic with the city’s predominant group, rather than coethnic with the bank, while simultaneously reducing the authority delegated to those managers and relying more on experienced insiders. The key implication is that firms are not passive in their response to shocks that intensify social divisions; they actively reorganize in order to keep operating across group lines.

Our results speak to a central question in organizational economics: how firms trade off local knowledge against incentive alignment ([Aghion and Tirole, 1997](#); [Dessein, 2002](#); [Alonso, Dessein and Matouschek, 2008](#)). In our setting, conflict raises the value of managers who can acquire soft information from local borrowers, but also sharpens the risk of biased lending and distorted communication with headquarters. Banks respond on both margins at once. They do not choose between local adaptation and central oversight; rather, they appoint managers better able to acquire

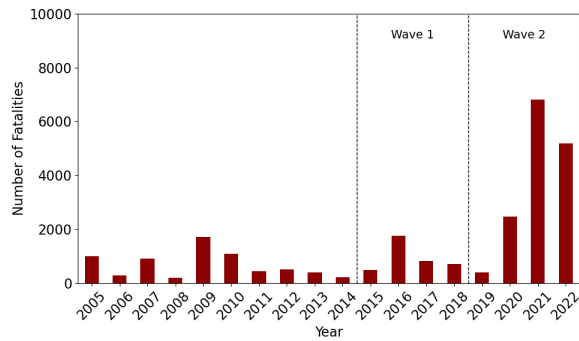
local information while simultaneously tightening the control exercised by headquarters. This joint adjustment is difficult to reconcile with explanations in which managers relocate voluntarily or customers drive the change, since banks would then have little reason to simultaneously tighten delegation and reassign insiders.

More broadly, the findings suggest that identity divisions can reshape the production of information inside organizations. A growing literature studies how ethnicity, culture, or political affiliation affect lending and other economic interactions (Hjort, 2014; Fisman et al., 2020; Frame et al., 2025; D’Acunto, Ghosh and Rossi, 2026; Eichengreen and Saka, 2025). Our evidence highlights a distinct mechanism: social divisions affect who can acquire information, how credibly that information can be transmitted, and how authority should be allocated between headquarters and the branch. In that sense, firms do not only passively suffer the effects of conflict, for example due to discrimination, but also actively manage it through their internal organization.

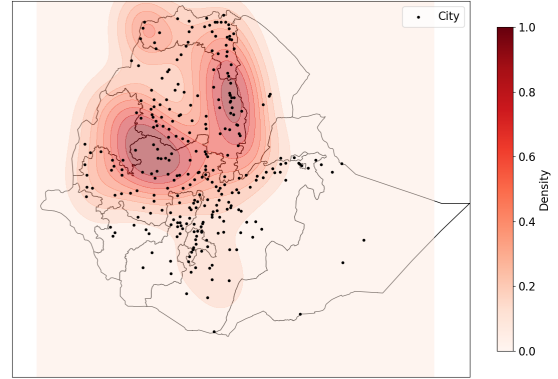
The Ethiopian banking sector provides a particularly sharp environment in which to study this mechanism, but the logic extends beyond this context. Many firms operate across salient identity boundaries, whether ethnic, linguistic, religious, or political. Whenever customer-facing information is locally embedded but organizations remain centrally governed, shocks that intensify identity salience can make local matching more valuable and delegation more costly. Our results therefore suggest a broader principle: firms may respond to polarization not by retreating from diverse markets, but by redesigning authority, monitoring, and personnel assignment to continue operating across group lines.

At the same time, our findings point to an important limit of adaptation. The organizational changes we document appear to help sustain lending activity without clear deterioration in observed loan performance, but they are not costless. Tighter control can slow decision-making, reduce initiative (Aghion and Tirole, 1997), and require greater reliance on internal labor markets. More generally, the need to offset social frictions with additional oversight implies that polarization is costly even when firms successfully adjust. Understanding those longer-run costs, and whether similar responses arise in other sectors and political settings, is an important direction for future work.

Figure 1: Ethnic conflict over time and space



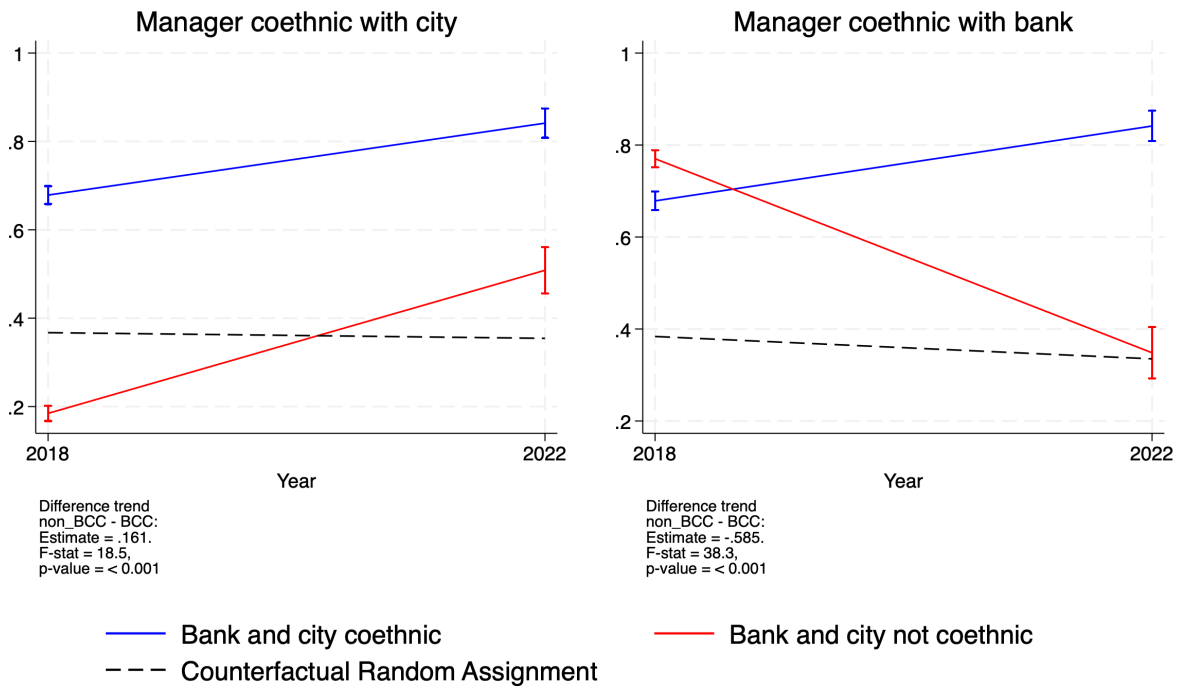
(a) Conflict over time



(b) Conflict over space

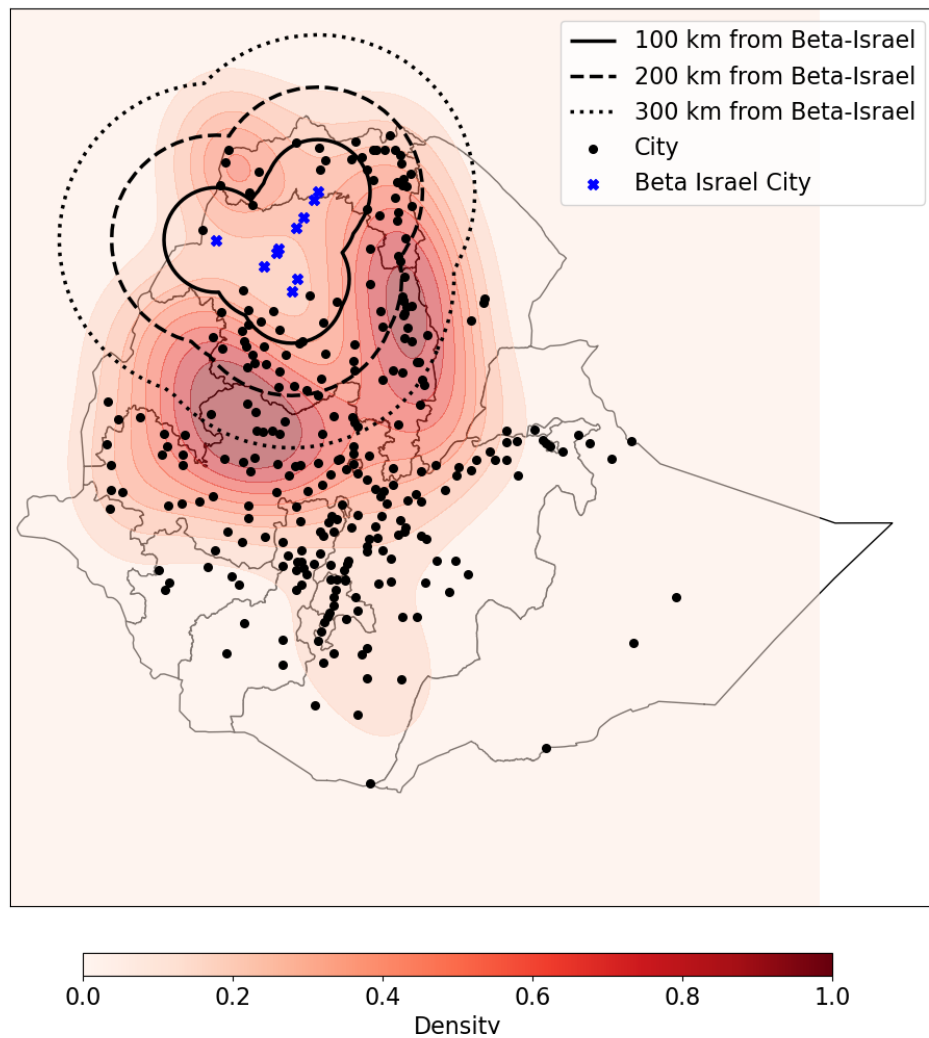
Notes: Panel A displays the number of fatalities from ethnic conflict in Ethiopia over time. The y-axis includes all fatalities from conflict involving at least one ethnic group in the ACLED database; this panel uses all events in ACLED. Panel B displays the lethality-weighted spatial intensity of ethnic conflict in Ethiopia from January 1, 2019 through December 31, 2022. Shaded areas are a kernel-density estimate of events weighted by fatalities and scaled to the colorbar. Black lines denote regional boundaries; black dots mark major cities.

Figure 2: Changes in organizational structure over time



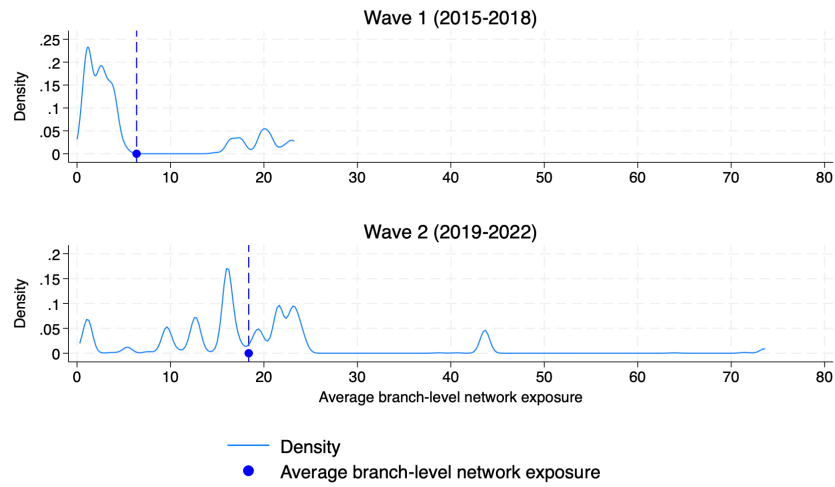
Notes: This figure presents the changes in organizational structure over time for two main outcome variables: An indicator for the manager and bank being coethnic and an indicator for the manager and city being coethnic. These figures present the changes in unconditional means for these outcomes, separately for branches operating in cities coethnic with the bank (bank coethnic city) and for branches operating in cities not coethnic with the bank (non bank coethnic city.) Finally, for the coethnicity variables we report the expected share of coethnic managers if the same sample of managers in terms of ethnic composition were to be randomly assigned to bank branches. We conduct this exercise 1,000 times and report the average of these simulations.

Figure 3: Beta-Israel Cities and Conflict



Notes: This figure displays the distribution of conflict events and the locations of Beta Israel cities in Ethiopia. Beta Israel cities are marked in red, while other cities are marked in black. The contours indicate distances of 100 km, 200 km, and 300 km from the nearest Beta Israel city, with the 100 km contour represented by a solid black line, the 200 km contour by a dashed black line, and the 300 km contour by a dotted black line. The density plot shows the weighted distribution of fatalities from ethnic conflict between 2015 and 2022, with darker regions representing higher densities. The map uses the Web Mercator projection (EPSG:3857) for accurate distance calculations.

Figure 4: Distribution of bank-level conflict exposure over time



Notes: This figure displays the distribution of the variable `NetworkExposure` from Equation 1 for two periods: 2015–2018 (top panel) and 2019–2022 (bottom panel). Each panel shows a kernel density (Gaussian, bandwidth 0.5) of `NetworkExposure` across our sample of branches, along with the mean value of `NetworkExposure` for that period.

Table 1: Summary statistics of analysis variables

Panel A: Manager characteristics					
	N	Mean	Std. Dev.	Min	Max
Bank coethnic manager	1,948	0.65	0.48	0	1
City coethnic manager	1,948	0.53	0.50	0	1
Manager born in region	1,432	0.42	0.49	0	1
Tenure in bank (years)	1,944	7.70	4.41	0	36
Tenure in branch (years)	1,943	2.68	2.62	0	35
Age	1,886	33.99	5.65	16	60
University degree	1,946	0.99	0.07	0	1
Male manager	1,946	0.83	0.37	0	1
Panel B: Branch characteristics					
	N	Mean	Std. Dev.	Min	Max
Share local employees	1,910	0.57	0.25	0.10	1.00
Branch employees	1,941	17.56	10.04	3	110
Panel C: Lending outcomes					
	N	Mean	Std. Dev.	Min	Max
Operational distance (km)	1,692	6.80	4.86	0.05	50.00
Log number of loans	1,503	2.43	1.34	0.00	8.52
Log average loan size	1,497	6.30	3.14	-4.61	10.95
Average lending rate	1,630	0.15	0.02	0.10	0.20
Collateral (share of loan)	1,441	0.95	0.19	0.50	1.50
Share loan default	1,569	0.06	0.14	0.00	1.00

Notes: This table reports summary statistics for the main analysis variables based on the branch survey, organised into three panels. Panel A: Manager Characteristics. Bank coethnic manager and city coethnic manager indicate whether the manager shares the ethnicity of the bank or city, respectively. Manager born in region indicates whether the manager was born in the same region as the branch. Tenure in bank and branch are measured in years. University degree and male manager are dummy indicators. Panel B: Branch Characteristics. Share local employees is the share of branch employees from the local area. Branch employees is the number of employees in the branch. Panel C: Lending. Operational distance is the maximum distance (in km) at which a branch services customers. Log number of loans and log average loan size are in natural logarithms, with loan size expressed in ETB 1,000. Average lending rate is the mean rate on the past 10 loans. Collateral is the typical collateral as a share of total loan size. Share loan default is the share of defaulting loans in the past year.

Table 2: Branch manager ethnicity

Panel A: Branches in Bank-Coethnic Cities						
	City coethnic manager			Bank coethnic manager		
	(1)	(2)	(3)	(4)	(5)	(6)
Bank Conflict Intensity	-0.003 (0.025)	0.023 (0.056)	-0.004 (0.025)	-0.003 (0.025)	0.023 (0.056)	-0.004 (0.025)
Local conflict intensity			0.012 (0.008)			0.012 (0.008)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	No	Yes	Yes	No	Yes
City-Time FE	No	Yes	No	No	Yes	No
2018 Mean dep. var	0.679	0.679	0.679	0.679	0.679	0.679
N (Branches)	443	368	443	443	368	443
Panel B: Branches in Non-Bank-Coethnic Cities						
	City coethnic manager			Bank coethnic manager		
	(1)	(2)	(3)	(4)	(5)	(6)
Bank Conflict Intensity	0.067*** (0.016)	0.043** (0.018)	0.070*** (0.016)	-0.110*** (0.015)	-0.091*** (0.018)	-0.117*** (0.016)
Local conflict intensity			-0.017* (0.009)			0.037*** (0.010)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	No	Yes	Yes	No	Yes
City-Time FE	No	Yes	No	No	Yes	No
2018 Mean dep. var	0.183	0.183	0.183	0.772	0.772	0.772
p-value	0.018	0.729	0.013	0.000	0.053	0.000
N (Branches)	531	464	531	531	464	531

Notes: The dependent variable is an indicator that equals 1 when a branch's manager is co-ethnic with the ethnic group associated with the city (columns 1–3) or with the ethnic group associated with the branch's bank (columns 4–6). Bank conflict intensity is the log intensity of bank-level exposure to conflict involving the bank's ethnic group, excluding conflict near the branch of interest, defined in equation 1. Local conflict intensity is the log of conflict intensity near the city as defined in equation 2. The mean (SD) of the within-branch change in log bank conflict intensity from 2018 to 2022 is 1.423 (1.371). Panel A restricts the sample to branches in cities coethnic with the bank, while Panel B focuses on branches in cities that are not. Standard errors, clustered at the branch level, are reported in parentheses. The reported p -value is for the test that the slope on bank conflict intensity is identical in bank coethnic and non bank coethnic cities. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 3: Delegation

Panel A: Ethnic conflict and delegation						
	Bank and city not coethnic			Bank and city coethnic		
	(1)	(2)	(3)	(4)	(5)	(6)
Bank conflict intensity	-1037.2*** (288.5)	-691.4* (355.9)	-1037.4*** (290.2)	-407.0 (410.9)	-1216.6 (862.7)	-402.2 (412.1)
Local conflict intensity			1.1 (134.1)			-408.8** (173.8)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	No	Yes	Yes	No	Yes
City-Time FE	No	Yes	No	No	Yes	No
2018 Mean dep. var	1681.7	1681.7	1681.7	1672.7	1672.7	1672.7
p-value	0.210	0.572	0.208	0.210	0.572	0.208
N (Branches)	531	266	531	443	158	443
Panel B: Manager ethnicity and delegation						
	Panel		Period 1 Only		Period 2 Only	
	(1) Non-coethnic b/se	(2) Coethnic b/se	(3) non-coethnic b/se	(4) Coethnic b/se	(5) non-coethnic b/se	(6) Coethnic b/se
City coethnic manager	-1518.3** (751.9)	-3128.0*** (1012.0)	-58.4 (177.7)	-310.7* (172.5)	-2624.0*** (939.4)	-4487.4** (1743.9)
Branch FE	Yes	Yes	No	No	No	No
Time FE	Yes	Yes	No	No	No	No
Constant	No	No	Yes	Yes	Yes	Yes
2018 Mean dep. var	1681.7	1672.7	1681.7	1672.7	7369.1	8195.2
p-value	0.202	0.202	0.309	0.309	0.347	0.347
N (Branches)	531	443	531	443	322	228

Notes The dependent variable in both panels is the largest loan a branch manager can approve without headquarters' agreement, measured in ETB 1,000. All 2022 nominal values are deflated to 2018 prices using annual CPI inflation rates from the World Bank World Development Indicators (indicator FP.CPI.TOTL.ZG). The dependent variable is winsorized at the 95th percentile within period $\times$ bank-city coethnicity cells. Panel A estimates equation 3 separately for branches where the bank and city are not coethnic (columns 1-3) and where they are coethnic (columns 4-6). Bank conflict intensity is the log intensity of bank-level exposure to conflict involving the bank's ethnic group, excluding conflict near the branch of interest. Local conflict intensity is the log of conflict intensity near the city. Panel B estimates equation 5. City coethnic manager is an indicator equal to one when the branch manager shares the ethnicity of the city. Odd columns restrict to branches where the bank and city are not coethnic; even columns to coethnic branches. Columns 1-2 use the full panel with branch and time fixed effects; columns 3-4 use the 2018 cross-section only; columns 5-6 use the 2022 cross-section only. Standard errors, clustered at the branch level, are reported in parentheses. The reported p-value tests whether the coefficient on the main regressor differs across the two subsamples based on equation 4 (Panel A) or the analogous interaction specification (Panel B). Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 4: Manager reallocation

Panel A: Branches in Bank-Coethnic Cities				
	New manager bank	New manager branch	Reallocated employee	New hire
	(1)	(2)	(3)	(4)
Bank Conflict Intensity	0.018** (0.009)	-0.011 (0.036)	-0.024 (0.036)	0.013 (0.008)
Mean dep. var	0.034	0.395	0.367	0.027
N (Branches)	442	441	441	441
Panel B: Branches in Non-Bank-Coethnic Cities				
	New manager bank	New manager branch	Reallocated employee	New hire
	(1)	(2)	(3)	(4)
Bank Conflict Intensity	-0.008 (0.006)	0.037* (0.019)	0.046** (0.019)	-0.008 (0.006)
Mean dep. var	0.017	0.362	0.347	0.015
p-value	0.015	0.652	0.092	0.038
N (Branches)	528	528	528	528

Notes: This table uses only data collected in 2022. The four outcome variables are (1) an indicator whether the manager joined the bank in 2021 or 2022 (after the outbreak of conflict in November 2020), (2) whether the manager joined the branch in 2021 or 2022, and whether conditional on joining the branch in 2021 or 2022 they were (3) reallocated from a different branch of the same bank or (4) joined the bank as a new employee in 2021 or 2022 (and did not change branch since). Bank conflict intensity is the log intensity of bank-level exposure to conflict, excluding local conflict, defined in equation 1. Panel A restricts the sample to branches in cities coethnic with the bank, while Panel B focuses on branches in cities that are not. Standard errors, clustered at the branch level, are reported in parentheses. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 5: Manager characteristics

Panel A: Branches in Bank-Coethnic Cities					
	Tenure in bank	Tenure in branch	Age of manager	University degree	Male manager
	(1)	(2)	(3)	(4)	(5)
Bank Conflict Intensity	-0.219 (0.239)	-0.342*** (0.127)	0.075 (0.327)	-0.001 (0.003)	0.028 (0.024)
Branch FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	6.801	2.393	33.867	0.993	0.867
N	443	443	443	443	443
Panel B: Branches in Non-Bank-Coethnic Cities					
	Tenure in bank	Tenure in branch	Age of manager	University degree	Male manager
	(1)	(2)	(3)	(4)	(5)
Bank Conflict Intensity	0.418*** (0.157)	0.122 (0.105)	0.846*** (0.217)	0.000 (0.002)	0.014 (0.015)
Branch FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	6.853	2.362	33.533	0.987	0.864
p-value	0.019	0.001	0.073	0.932	0.236
N	531	531	531	531	531

Notes: This table focuses on five outcome variables (1) the manager's tenure at the bank in years, (2) the manager's tenure at the branch in years, (3) the age of the manager in years, (4) whether the manager has a university degree (BA or MA), and (5) whether the manager is male. Bank conflict intensity is the log intensity of bank-level exposure to conflict, excluding local conflict, defined in equation 1. Local conflict intensity the log of conflict intensity near the city as defined in equation 2. The mean (SD) of the within-branch change in log bank conflict intensity from 2018 to 2022 is 1.423 (1.371). Panel A restricts the sample to branches in cities coethnic with the bank, while Panel B focuses on branches in cities that are not. Standard errors, clustered at the branch level, are reported in parentheses. The reported p -value is for the t -test that the parameter estimates for branches in bank-coethnic cities (Panel A) and in non bank-coethnic cities are the same. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 6: Synthetic CEO Expectations of Effects of Conflict

<i>Panel A: The effect of conflict on mechanisms</i>								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CEO Assessments				Mechanism Weights			
	Info Acq.	Info Comm.	Ethnic Bias	Safety Concern	Info	Align	Safety	Other
City-coethnic	54.52*** (0.35)	-22.83*** (0.47)	39.88*** (0.68)	-27.80*** (0.81)	12.47*** (0.31)	-7.01*** (0.33)	-9.19*** (0.30)	3.73*** (0.24)
High conflict	-4.61*** (0.43)	-1.34*** (0.39)	5.63*** (1.04)	30.68*** (0.93)	-4.52*** (0.44)	-3.18*** (0.44)	9.11*** (0.49)	-1.41*** (0.28)
High conflict × City-coethnic	3.91*** (0.54)	-2.75*** (0.87)	-3.50*** (1.08)	-8.45*** (1.47)	1.37** (0.63)	3.26*** (0.58)	-3.51*** (0.57)	-1.12*** (0.42)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. var. mean	58.04	69.28	51.49	44.49	34.77	37.43	18.45	9.35
Observations	742	742	742	742	742	742	742	742
R ²	0.985	0.823	0.884	0.822	0.748	0.525	0.721	0.389

<i>Panel B: The effect of conflict on outcomes</i>								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Outcomes				Lending (%)		NPL (%)	
	Deleg.	Wage Prem.	Exp. NPL	Lend Vol.	City-Coeth.	Bank-Coeth.	City-Coeth.	Bank-Coeth.
City-coethnic	-158.29*** (30.28)	-25.73*** (0.50)	0.77*** (0.12)	44.30*** (1.83)	1.26*** (0.46)	-5.12*** (0.42)	1.91*** (0.16)	-2.69*** (0.25)
High conflict	-174.21*** (40.25)	9.50*** (0.37)	2.05*** (0.16)	-11.76*** (1.37)	-2.37*** (0.61)	1.97*** (0.54)	1.70*** (0.16)	3.74*** (0.39)
High conflict × City-coethnic	-2.03 (48.78)	-2.40*** (0.88)	0.39* (0.21)	-14.67*** (2.93)	3.25*** (0.76)	-2.45*** (0.62)	1.19*** (0.28)	-2.63*** (0.40)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. var. mean	704.85	9.73	7.77	94.08	65.88	17.80	8.38	6.83
Observations	742	742	742	742	742	742	742	742
R ²	0.443	0.856	0.583	0.751	0.510	0.511	0.568	0.439

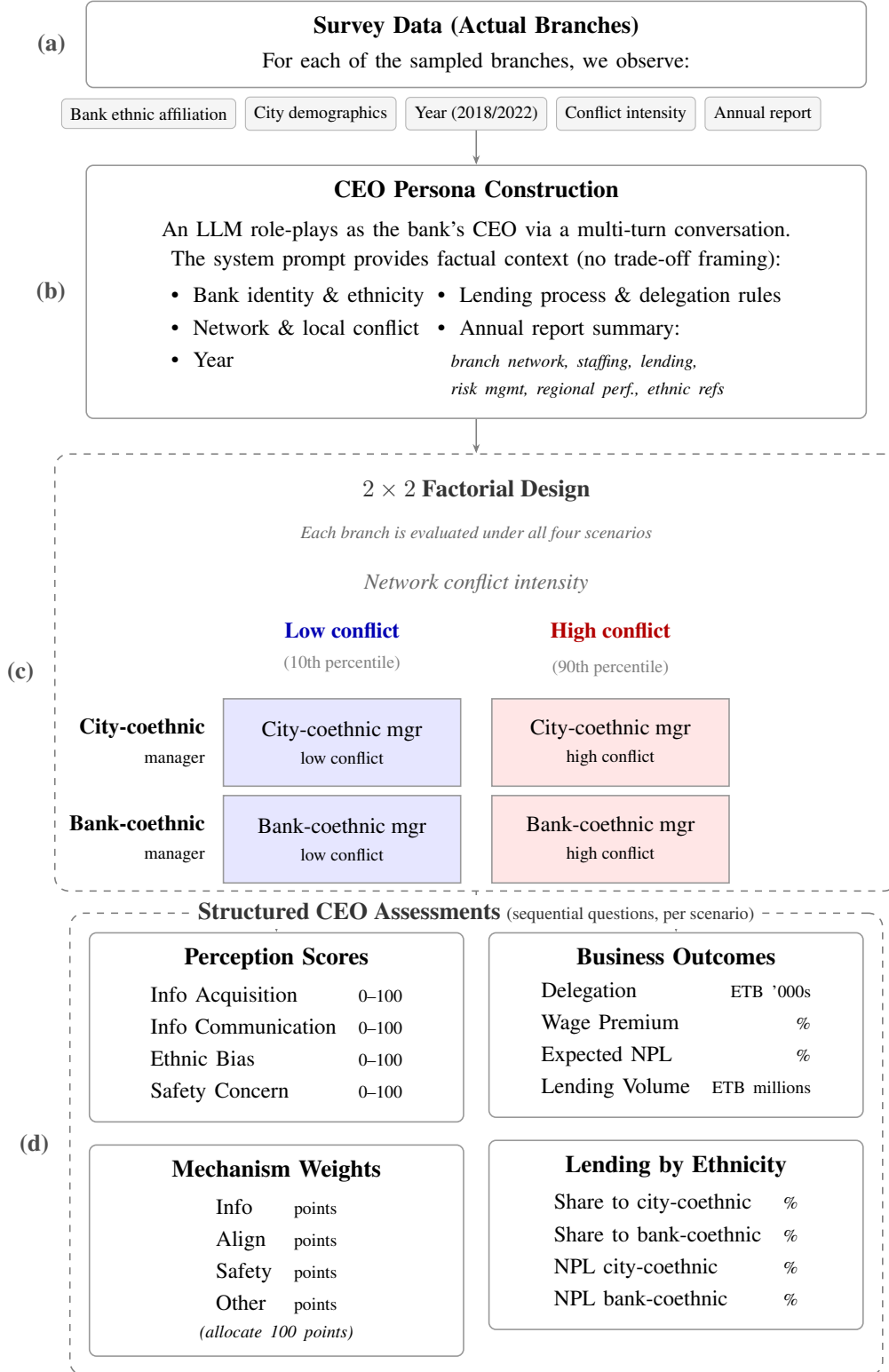
Notes: This table reports OLS estimates from an AI survey experiment in which a large language model (LLM) role-plays as a bank CEO evaluating hypothetical branch managers described in standardized vignettes. Each vignette varies (i) whether the manager is city-coethnic versus bank-coethnic and (ii) whether the branch is assigned high versus low conflict intensity. The specification includes indicators for City-coethnic, High conflict, and their interaction. City-coethnic equals one if the hypothetical manager's ethnicity matches the branch city's dominant ethnic group; bank-coethnic managers (ethnicity matching the bank headquarters' dominant ethnic group) are the omitted category. High conflict equals one for branches assigned conflict at the 90th percentile of the fatalities distribution; low conflict (10th percentile) is the omitted category. Panel A (Mechanisms). Columns (1)–(4) report LLM-elicited expectations on a 0–100 scale: Info Acq (ability to gather soft information about local borrowers), Info Comm (alignment of loan recommendations with headquarters' objectives), Ethnic Bias (likelihood of ethnic favoritism in lending), and Safety Concern (physical security risk). Columns (5)–(8) report the LLM's stated mechanism weights (shares in percentage points) assigned to Info, Align, Safety, and Other. Panel B (Outcomes). Columns (1)–(4) report: Deleg. (maximum loan size approvable without headquarters authorization; ETB thousands), Wage Prem. (percent), Exp. NPL (percent), and Lend Vol. (ETB millions). Columns (5)–(6) report expected lending to city-coethnic and bank-coethnic borrowers (percent). Columns (7)–(8) report expected NPLs for city-coethnic and bank-coethnic borrowers (percent). The sample is restricted to branches where the bank headquarters' dominant ethnicity differs from the branch city's dominant ethnicity. All specifications include branch fixed effects and year fixed effects (as reported in the table). Standard errors clustered at the branch level are in parentheses. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 7: Branch-level lending

Panel A: Bank-City Coethnic						
	Operational distance	Log number of loans	Log average loan size	Average lending rate	Collateral percentage	Share loan default
	(1)	(2)	(3)	(4)	(5)	(6)
Bank Conflict Intensity	-1.517*** (0.511)	0.082 (0.096)	0.847*** (0.262)	0.002* (0.001)	0.022 (0.014)	-0.030** (0.013)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	7.756	2.185	6.056	0.146	1.009	0.050
N	443	443	443	443	443	443
Panel B: Not Bank-City Coethnic						
	Operational distance	Log number of loans	Log average loan size	Average lending rate	Collateral percentage	Share loan default
Bank Conflict Intensity	0.686*** (0.188)	-0.212*** (0.053)	0.493*** (0.138)	0.001 (0.001)	-0.015* (0.008)	-0.002 (0.007)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	7.514	1.934	6.040	0.148	0.998	0.046
p-value	0.000	0.099	0.037	0.182	0.003	0.049
N	824	616	608	734	536	650

Notes: The dependent variables are the operational distance of the branch, i.e. how far away from the branch it serves customers, the log of the number of loans the branch has outstanding, the log of the average size of outstanding loans, the lending rate on a typical loan, the percentage of collateral on a typical loan and the share of loans that default. Bank conflict intensity is the log intensity of bank-level exposure to conflict, excluding local conflict, defined in equation 1. The mean (SD) of the within-branch change in log bank conflict intensity from 2018 to 2022 is 1.423 (1.371). Panel A restricts the sample to branches in coethnic cities, while Panel B focuses on branches in non-coethnic cities. The regressions include branch and time fixed effects. Standard errors, clustered at the branch level, are reported in parentheses. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Figure 5: AI survey experiment design.



Notes: We generate a synthetic bank-CEO which we ask to evaluate hypothetical managers under a 2×2 factorial design varying manager ethnicity (city-coethnic vs. bank-coethnic) and conflict intensity (10th vs. 90th percentile). For each scenario, the CEO provides structured assessments across eight outcome dimensions (panel d, top), mechanism weights, and expected lending patterns by customer ethnicity (panel d, bottom).

Table 8: Beta-Israel variation and branch managers

Panel A: Bank-City Coethnic						
	(1) City coethnic	(2) Bank coethnic	(3) Delegation	(4) Tenure Bank	(5) Tenure Branch	(6) Age
Beta Israel Exposure	0.050 (0.094)	0.050 (0.094)	-0.943 (2.040)	-1.250 (0.932)	-1.156*** (0.433)	-1.182 (1.263)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	0.679	0.679	1.673	6.801	2.393	33.867
N	443	443	443	443	443	443
Panel B: Not Bank-City Coethnic						
	City coethnic	Bank coethnic	Delegation	Tenure Bank	Tenure Branch	Age
Beta Israel Exposure	0.349*** (0.107)	-0.537*** (0.113)	-7.027*** (1.796)	0.991 (0.976)	0.035 (0.719)	4.917*** (1.522)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	0.183	0.772	1.682	6.853	2.362	33.533
p-value	0.036	0.000	0.025	0.097	0.156	0.002
N	531	531	531	531	531	531

Notes: The dependent variables are an indicator that equals 1 when a branch's manager is co-ethnic with the ethnic group associated with the city (column 1), or the ethnic group associated with the branch's bank (columns 2). Beta Israel Exposure is the share of branches within 100km of a historic Beta Israel city. Panel A restricts the sample to branches in coethnic cities, while Panel B focuses on branches in non-coethnic cities. Standard errors, clustered at the branch level, are reported in parentheses. The reported p -value is for the t -test that the parameter estimates for branches in bank-coethnic cities (Panel A) and in non bank-coethnic cities (Panel B) are the same. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table 9: Beta-Israel variation and lending

Panel A: Bank-City Coethnic						
	(1) Oper. distance	(2) Num. loans	(3) Loan size	(4) Lending rate	(5) Collateral	(6) Default
Beta Israel Exposure	-3.933*** (1.456)	0.167 (0.309)	2.531*** (0.680)	0.002 (0.004)	0.225*** (0.051)	-0.129*** (0.047)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	7.756	2.185	6.056	0.146	1.009	0.050
N	443	443	443	443	443	443
Panel B: Not Bank-City Coethnic						
	Oper. distance	Num. loans	Loan size	Lending rate	Collateral	Default
Beta Israel Exposure	8.434*** (1.384)	-0.524 (0.370)	4.036*** (0.919)	0.007 (0.006)	-0.077 (0.052)	0.044 (0.056)
Branch FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
2018 Mean dep. var	7.514	1.934	6.040	0.148	0.998	0.046
p-value	0.000	0.153	0.188	0.462	0.000	0.019
N	531	531	531	531	531	531

Notes: The dependent variables are the operational distance of the branch, i.e. how far away from the branch it serves customers, the log of the number of loans the branch has outstanding, the log of the average size of outstanding loans, the lending rate on a typical loan, the percentage of collateral on a typical loan and the share of loans that default. Beta Israel Exposure is the share of branches within 100km of a historic Beta Israel city. Panel A restricts the sample to branches in coethnic cities, while Panel B focuses on branches in non-coethnic cities. Standard errors, clustered at the branch level, are reported in parentheses. The reported p -value is for the t -test that the parameter estimates for branches in bank-coethnic cities (Panel A) and in non bank-coethnic cities (Panel B) are the same. Statistical significance is denoted by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

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