

RESEARCH ARTICLE

# The words that keep people apart: official language and accountability

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## Abstract

This paper examines how the distance between a country's official language and the languages spoken by its citizens influences accountability. Two arguments support this relationship: first, the role of language as a tool for communication between elites and citizens; and second, its role in shaping cultural patterns that underpin social interactions. Using a dataset of 147 countries, we reveal a consistent negative correlation between linguistic distance and levels of accountability across all measures. Higher educational attainment can mitigate the negative impact of a foreign official language on accountability.

**Keywords:** Accountability; education; language policy

**JEL Codes:** H210; D020; D720; C260

## Introduction

When the Gambia, a small British colony surrounded by French settlements, obtained independence in 1963, it chose English as its official language. In 2014, President Yahya Jammeh adopted Arabic as the new language for official purposes and education, stating, 'We no longer believe that for you to be a government you should speak a foreign language; we are going to speak our own language'.<sup>1</sup> However, Arabic is not the language of any Gambian ethnic group.<sup>2</sup> The decision was politically and religiously motivated since Jammeh was pivoting the country towards Arabic allies and, in 2015, proclaimed the Islamic Republic of Gambia.<sup>3</sup> This decision was reversed in 2017 by the new President Adama Barrow.<sup>4</sup>

This paper explores the relationship between the official language of a country and accountability, arguing that the former can be one of the factors that help explain variations in the latter. Typically, a country's official language is used in government, judiciary, and administration, while accountability refers to the constraints imposed on political power by the ruling elite.<sup>5</sup> Effective accountability requires that these elites justify their actions and face potential sanctions from the citizenry

<sup>1</sup>Source: [Link to source](#).

<sup>2</sup>According to Ethnologue (2021), Mandinka is spoken as a first language by 38% of the population, Pulaar by 21%, Wolof by 18%, Soninke by 9%, Jola by 4.5%, Serer by 2.4%, Manjak and Bainouk by 1.6% each, Portuguese Creole by 1%, and English by 0.5%.

<sup>3</sup>Source: [Link to source](#).

<sup>4</sup>Source: [Link to source](#).

<sup>5</sup>In the paper, we use the definition of official language adopted by Laitin and Ramachandran (2016, p.457) as 'one in which the constitution or the organic laws of the country have been written'.

(Luhmann *et al.*, 2020). The Gambian case exemplifies several key elements we consider and puts forward the political role of languages.

In this study, we emphasise the relational nature of accountability, where the obligation of elites to inform, justify, and face the consequences of their actions requires frequent interaction with the population (Schedler *et al.*, 1999). We argue that the official language is crucial for the functioning of accountable institutions, as it serves as the primary channel for communication between the elites and the people. To explain the role of the official language in holding elites accountable, we draw on two interpretations of the function of language in social interactions. First, language is a tool for communication. Second, it shapes the cultural patterns that form the basis of interactions between individuals. A language distant from those spoken by the majority complicates the understanding of elite behaviour and the formal processes for sanctioning that behaviour. In addition, it hampers the formation of shared cultural patterns that impose constraints on elite power.

To test our hypothesis that linguistic distance decreases accountability, we have compiled a cross-sectional dataset covering 147 countries. We used various accountability measures from multiple sources and quantified the linguistic distance using the Average Distance from the Official Language (ADOL) proposed by Laitin and Ramachandran (2016). We examined this relationship within a model that incorporates several factors explaining cross-country variation in accountability. Our analysis reveals that greater linguistic distance is consistently associated with lower levels of accountability across all measures examined, and these findings remain robust after controlling for other variables. Furthermore, we investigated the role of secondary and tertiary education in mediating the impact of linguistic distance on accountability, demonstrating that higher education levels may mitigate the negative effects of a foreign official language.

The novelty of the paper lies in the link between language and accountability. Economists have addressed language-related topics in various ways (Ginsburgh and Weber, 2020). First, in international trade, language similarity facilitates exchanges (Melitz, 2008). Second, in healthcare, government guidance in the common language is more effective (Djité, 2008; Gomes, 2014). Third, instruction in a non-native language impairs student performance (Laitin and Ramachandran, 2022). Fourth, assimilation policies that require education in a foreign language can lead to in-group behaviour (Bisin *et al.*, 2011; Fouka, 2020). Fifth, ethnolinguistic fractionalisation, which involves the number, size, and location of cultural groups, has been associated with civil conflict and low economic growth (Alesina *et al.*, 2003; Easterly and Levine, 1997). Sixth, studies that examine the effect of culture on economic outcomes often use linguistic variables as proxies for cultural values (Galor *et al.*, 2018; Licht *et al.*, 2007; Tabellini, 2010). Our work adds a new perspective by considering how the official language shapes the relationship between elites and citizens.

Linguistic anthropology offers a radical view of the link between language and power. Although most linguists follow Saussure (1986) and Chomsky (1965, 1986) in studying language as formal structures, linguistic anthropology sees it as a social action, a cultural resource, and a set of sociocultural practices (Schieffelin, 1990, p.16). People do things with words (Austin, 1962; Searle, 1969). Linguistic anthropologists (Brenneis and Macaulay, 1996; Duranti, 1997; Hanks, 1996) view language, spoken or written, as embedded in sociocultural relations. Words are non-neutral because 'All words have the taste of a profession, a genre, a tendency, a party, a particular work, a particular person, a generation, an age group, the day and hour' (Bakhtin, 1981, p.238). Unequal power relations can lead to symbolic violence, as seen when one dialect is considered superior, giving social significance to arbitrary differences (Bourdieu, 1991, p.170). Thus, language and power are intertwined, with language reflecting and potentially altering social reality (Gumperz and Levinson, 1996; Hill and Mannheim, 1992; Kaschula and Wolff, 2020; Spender, 1980).

The rest of the paper is structured as follows: Section 'Official language and accountability' explains how language impacts accountability, reviewing the relevant literature. Section 'Historical background: official language, colonization, and decolonisation' provides a historical background. Section 'Data'

presents the data. Section ‘Empirical strategy & results’ shows the empirical analysis, and Section ‘Robustness checks’ provides robustness checks. Section ‘Potential mechanisms: education’ discusses the role of education, and Section ‘Conclusions’ concludes. Supplementary Material, available in an online repository<sup>6</sup>, contains further robustness checks and information.

### Official language and accountability

Historically, the adoption of an official language has been conceived as a relevant part of the homogenisation and standardisation process that allows the control of a territory and the people who live on it (Blanc and Kubo, 2024). This language becomes the means of communication between citizens and between citizens and the state.

However, countries face significant linguistic diversity within their territory. According to UNESCO (2009), 118 of the 209 countries have a linguistic diversity score of at least 0.33, and 88 are above 0.5.<sup>7</sup> To address this diversity, countries may adopt different models (Cabrera, 2024), ranging from monolingual models that use a single shared language for institutions to multilingual models that allow the use of more languages in public administration. However, multilingual models face relevant transaction costs<sup>8</sup> but have the advantage of representing the majority of the population (Ginsburgh and Weber, 2005).

Furthermore, extensive linguistic diversity, along with indigenous languages lacking written traditions (Laitin and Ramachandran 2025), can hinder the use of multilingual models. In India, 22 indigenous languages are co-official, yet English remains dominant in education, the judiciary, and administration. In Algeria, most people speak a dialect different from classical Arabic, which has led to resistance against the use of classical Arabic in schools; French remained the dominant language for years despite efforts to replace it. These cases show that, despite linguistic diversity and multilingual policies, one official language often dominates state-citizen interactions.

Our argument unfolds in two parts to explain how an unfamiliar official language weakens constraints on elite power. First, it limits citizens’ understanding of key information needed for accountability. Second, it hampers the development of shared cultural values that underpin accountable institutions.

### Information

Regarding the first line of argument, we start our reasoning by stressing that information is an important component of accountability (Goetz, 2008; Schedler *et al.*, 1999; Williams, 2015).<sup>9</sup> The public’s ability to scrutinise and hold the elite accountable depends on the accessibility of information regarding their conduct.<sup>10</sup> Citizens’ access to information is essential for accountability, from elections to interactions with state administrative bodies. While elections theoretically allow voters to replace governments not following mandates, accountability requires an informed electorate aware of government actions. Informed voters use available information to decide whether to support the incumbent or the opposition. However, without insights into the consequences of prevailing policies, voters may not penalise the incumbent (Kolstad and Wiig, 2009). Ferraz and Finan (2008) showed that disseminating information on corruption through randomised municipal audits in Brazil significantly reduced the re-election prospects of corrupt mayors.

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<sup>7</sup>Diversity indexes measure linguistic heterogeneity within a country. The indexes used in the UNESCO reports account for heterogeneity by also considering the linguistic distance between the languages spoken in a country.

<sup>8</sup>Translation is a possibility but is extremely costly compared to direct communication (Melitz, 2008).

<sup>9</sup>Accountability has two dimensions: answerability and enforcement (Schedler *et al.*, 1999). Answerability involves reliable information, while enforcement rewards good behaviour and punishes wrongdoing (Goetz, 2008).

<sup>10</sup>Williams (2015) argued that transparency is *per se* a constraint on the elites.

Furthermore, the relevance of comprehension of information for accountability extends beyond the electoral process. The widespread diffusion of information acts as an incentivising mechanism for elites to pursue policies beyond narrow self-interest (Gavazza and Lizzeri, 2009; Reinikka and Svensson, 2004, 2005). An empirical investigation in Uganda by Reinikka and Svensson (2011) underscores that furnishing systematic information to monitor local officials' administration of a substantial education grant programme curtails the misappropriation of public funds and increases public expenditure in education.

Building on these arguments, we argue that a limited understanding of the official language reduces citizens' ability to grasp information about elite behaviour, weakening their monitoring capacity. Prior work has shown that language is a major barrier to accessing key information and delivering public services. For example, health programmes often fail when people cannot understand medical instructions (Djit , 2008; Gomes, 2014).

Second, limited proficiency in the official language hinders access to and fair treatment within the court system. Zhang and Lee (2020) found that in 18th-century France, improving citizens' command of standard French enhanced their ability to navigate the judicial system without intermediaries. Language barriers have also been linked to under-reporting of crime (Pogrebin and Poole, 1990). In Senegal, Dissake (2022) notes that, despite hearings being in French or English, many litigants lack proficiency in either. Similarly, studies of the U.S. court system show that many immigrants struggle with English, and inadequate translation services limit access to a fair trial (Davis, 1985; Urbina, 2004).

Third, linguistic barriers can hinder democratic participation. Individuals from linguistic minorities may be discouraged from voting if voter information, ballots, and assistance are not available in a language they understand. In the U.S., about eight million citizens are estimated to have limited English proficiency for voting (US Commission on Civil Rights, 2018). Studying South Africa, McLaughlin (2015) finds that voter turnout is higher in municipalities with inclusive language policies.

It is worth noting that language can be an obstacle to human capital formation. The literature consistently finds that receiving education in a language other than one's mother tongue negatively affects student performance and educational attainment, as it introduces additional cognitive challenges (Laitin and Ramachandran, 2022). Jain (2017) shows that Indian districts where the language of instruction differed from the local language had lower literacy and college graduation rates compared to districts where it matched the mother tongue.

Several studies have examined the impact of language-related education reforms. Eriksson (2014) finds that the Bantu Education Act, which mandated eight years of mother tongue instruction for all Black students in South Africa, improved literacy, educational outcomes, and ultimately wages among the Black population. Ramachandran (2017) shows that introducing mother tongue instruction in primary schools for Ethiopia's largest ethnic group increased reading skills and the likelihood of completing primary education. Similarly, Jain (2017) finds that aligning the medium of instruction with students' home language led to long-term improvements in educational attainment.

## Culture

In linking official language to accountability, we view language not only as a communication tool but also as central to shaping and transmitting cultural norms. This connection is supported by a long-standing literature, beginning with Whorf (1956) and Sapir (1985), which argues that language reflects the worldview of its culture. Language thus shapes the cultural categories that influence identity and behaviour. Nisbet (2003) illustrates this by showing that multilingual individuals respond differently to the same question depending on the language used. At a macro level, Kashima and Kashima (1998) find that grammatical rules, such as pronoun dropping, are correlated with cultural traits like individualism, indicating that language structure can shape self-other perceptions.

Two seminal papers in the economics of culture, Licht *et al.* (2007) and Tabellini (2010), use the language spoken in a country as a key explanatory variable for the culture of the country. In motivating this choice, Licht *et al.* (2007, p.672) argue that the 'grammar of a language may transmit and reproduce

culture and social categories'. These papers gave stimulus to a growing literature that identifies language as an important determinant of culture (Chen, 2013; Gay *et al.*, 2018; Hicks *et al.*, 2015; Santacreu-Vasut *et al.*, 2017, 2013).

Based on this literature, we argue that the official language of a country is one of the factors that leads to the formation of shared cultural values among the people who live there. Conversely, the inability of the majority of the population to speak the official language creates a cultural gap between the people and the elite who are educated and imbued in the culture conveyed by the official language.

In linking culture to accountability, we highlight how a lack of shared linguistic and cultural background can affect institutions. Drawing on North (1990), we view institutions as 'human-devised constraints that shape human interaction' (North, 1990, p. 3), comprising both formal and informal rules. Formal institutions include codified laws and regulations enforced by governments and legal systems. Informal institutions are unwritten norms and conventions embedded in social and cultural practices. Crucially, North argues that formal institutions often rely on informal ones: for example, a legal system may fail if cultural norms do not support compliance with the rule of law.

We argue that the lack of a shared cultural background between elites and citizens weakens the informal foundations of accountable institutions. These institutions rely on common norms that constrain elite behaviour and help citizens interpret their relationship with power. When such norms are shared, people intuitively grasp what is expected from elites and the consequences of challenging misconduct. In contrast, when values are unfamiliar, citizens cannot discern the principles guiding elite actions. This gap between formal and informal institutions reduces electoral participation and weakens democratic mechanisms to check power. Even where constitutions mandate accountability, their impact is limited if expressed in a language distant from everyday communication.

Previous studies support the link between culture and institutions, as well as the connection between culture and accountability (Alesina and Giuliano, 2015; Bisin and Verdier, 2017; Guiso *et al.*, 2015; Kaasa and Andriani, 2022). A common point in all these studies is that institutions reflect the culture, and that to be effective, institutional reforms must consider the cultural context.

Therefore, based on these considerations, our hypothesis is that:

H1: Linguistic distance between the official language and the language(s) spoken by the majority of the population reduces accountability.

### Historical background: official language, colonization, and decolonisation

This section provides a historical overview of colonial and post-colonial language policies to illustrate how linguistic separation and hierarchies were established and maintained. Understanding this background is pivotal for our argument that linguistic distance influences accountability. The enduring effects of these policies created social and political divisions by privileging certain languages and groups while excluding others, thereby shaping patterns of access to power and participation in governance. By tracing these developments, we shed light on how linguistic exclusion has been historically embedded and continues to affect the capacity for accountable governance today.

### Missions, colonies, and languages

Colonial governments co-opted educated indigenous people to translate and help run the local government and chose small, educated elites they were able to control and tie to the interests of the colonial state. In addition, colonial governments had little interest in mass education since it was expensive, reduced revenues, and potentially fostered rebellion. If education was encouraged, government officials primarily backed a practical variety, such as carpentry, masonry, and horticulture (Furley and Watson, 1978; Kelly, 2000a,c; Manning, 1998; Sundkler and Steed, 2000).<sup>11</sup>

<sup>11</sup>For surveys of the literature on the history of education and the role of missions, see Selhausen (2019) for sub-Saharan Africa and Valencia Caicedo (2019) for Asia and Latin America.

For example, in Vietnam, the French colonial government closed indigenous schools, pressured the Japanese government to prevent the Vietnamese from acquiring education in Japan, and educated only as many Vietnamese after primary school as the colonial government could hire and control (Kelly, 2000a,c). The French focused education on practical skills (particularly farming) and did not provide the Vietnamese with skills to let them compete with French settlers for senior positions in the colonial administration. Throughout Africa, the French educated only a tiny elite, purposely trained to be separate from other Africans in language and culture (Grier, 1999; Kelly, 2000b,d). Similarly, the Italians, Portuguese, and Spanish also educated only a small portion of the non-European population in their colonies (Isichei, 1995).

The British made little effort to educate colonial subjects since they tried to run their colonies as cheaply as possible (Ferguson, 2002; Frankema, 2012). Enslavers and those who used unskilled and forced labour were especially averse to education, often even refusing to teach enslaved people how to read (Blouet, 1990). For example, before 1813, the British East India Company schools in India trained a total of only a few hundred students, almost exclusively elite Muslims and Hindus from the highest castes, and lower-caste Hindus were explicitly excluded from company schools (Ingham, 1956).

Protestant missionaries were instrumental in administering colonies cheaply. They promoted education aligned with British interests, offering incentives to missionaries who educated a few students intensively in English with a utilitarian curriculum. Mass education efforts were steered toward practical skills (Furley and Watson, 1978; Ingham, 1956). This system produced a small elite and a broader class of English-speaking labourers trained for roles needed by British firms, such as planters and tradespeople.

### *Patterns of adoption during decolonisation*

Decolonisation created room for a new language policy once the imperial powers left their colonial possessions. Patterns of adoption of new languages have been different around the world. In Indochina, French was quickly replaced as an official language by the local national languages. In North Africa, post-independence policies attempted to impose Arabisation, obstructed by the educational heritage of the French system, particularly in the sciences and the universities, and the loyalty of part of the population to Berber, a pre-Arabic language spoken by populations historically hostile to Arabisation. The result of independence was to replace the hegemony of colonial rule with partial success in imposing a new national dominant language (see Spolsky (2018) for an extensive review).

Things were more complicated in Sub-Saharan Africa (SSA) and East Asia. In SSA, around eight hundred distinct languages are spoken, none by more than 8% of the population, as with Swahili and Hausa (Ornstein, 1964). In this context, revolutionary leaders needed to communicate both domestically and internationally, choosing French and English (the languages of the former colonisers) as the 'national' languages, despite only 1 to 10% of the population speaking these Western tongues. A similar pattern occurred with Portuguese in SSA and Latin America (Spolsky, 2017).

In India, there are a hundred major languages or dialects, and the new Republic of India chose Hindi as the overall medium, together with a subsystem of twelve regional co-official tongues.<sup>12</sup> English was kept as an unofficial junior partner with Hindi, but there was strong resistance to abandoning it since the reliance upon English in government, industry, research, and higher education was significant. Besides, in southern India, where Telugu and other Dravidian (non-Indic) tongues are spoken, there was strong resentment against 'Hindi imperialism', and English was favoured (Ornstein, 1964).

<sup>12</sup>Laitin (1989) describes how resistance from political elites led to India's de facto 3 *pm* 1 language policy: Hindi and English are spoken nationwide, plus a state language used in primary education. In states where Hindi is also the regional language, students learn two languages. In contrast, in states with strong linguistic minorities, a fourth language must also be learned.



Indeed, a major reason for choosing an alien language is its neutrality. In a multilingual nation, unless one language group is numerically and/or politically dominant, selecting an outside language as official may be a fair and workable solution. All indigenous groups 'start at zero', since learning the alien language is equally onerous for all groups. This can even reduce the risk of internal conflict. However, an equal 'beginning' is unlikely since some group members already know the new official language, with all the benefits (for example, in terms of education) that this entails.

### *Language and elite closure*

Over time, the continued dominance of colonial languages not only shaped language policy but also became a powerful tool for social differentiation. The continued attractive status of the colonial language and the privileges it conferred decreased the acceptance of the need to develop language education policies that recognise existing diversity, so that a large proportion of the population continued to be blocked from access to economic and political power. In many circumstances, local languages were stigmatised and banned from school use, reducing their status even in the eyes of their speakers. These features were described by Siachitema (1991) on language attitudes in Zambia in institutional participation, where English is the official language. Spolsky (2018) provides several examples of language policy during and after the French colonisation.

The elite were distinguished by their use of the colonial language, which served to set them apart. Myers-Scotton (1993), in her model of elite closure, identifies three ways in which elites are distinguished from others:

1. If the elites are fluent in a language different from those that others know, this fluency is an identifying feature of elites.
2. If elites use, particularly in public situations, a language different from the one others use, their use patterns are a means of identifying elite members. This gives a utilitarian value to the language and its use.
3. If the way elites speak is judged positively and therefore has psychological value, they are incentivised to retain this evaluation by ensuring that their linguistic abilities and use patterns remain distinctive.

In Kenya, English serves as the elite language in government and education, with English–Swahili switching used by civil servants to exclude less-schooled speakers (Myers-Scotton, 1993). In Tanzania, the shift from Swahili in primary to English in secondary school limits rural advancement and concentrates public jobs among Anglophones (Roy-Campbell and Qorro, 1997). Under apartheid, South Africa enforced Afrikaans and English for university access and top jobs; English still dominates law, finance, and education post-1994 (Webb, 2002). In Zambia's Copperbelt, Town Bemba spread as an urban lingua franca, but Standard English remains key for white-collar jobs, reinforcing labour divides (Spitulnik, 1996).

In Senegal, French dominates administration and post-primary education, limiting rural Wolof speakers' advancement and reserving civil-service jobs for urban francophones (Albaugh, 2014). Côte d'Ivoire shows a similar pattern: capital-city French signals elite status, while Mandé and Kru speakers are channelled into the informal sector (Calvet, 1999; Djité, 2008). In Mali, French-only legislation deepens the gap between the state and citizens, allowing a schooled elite to capture rents (Djité, 2008). In the Democratic Republic of Congo, the colonial legacy of the 'évolués' persists: French fluency remains key to accessing state jobs and the formal mining sector, while Lingala and Swahili speakers are largely confined to subsistence roles (Albaugh, 2014). In Cameroon, unequal access to francophone schools and French-dominated civil-service exams reinforce regional inequalities and limit upward mobility (Calvet, 1999; Djité, 2008).

Table 1. Control variables overview

Variable Name	Brief Definition	Origin	Period of Analysis
<i>General Country Characteristics</i>			
Pop (log)	Log. of average population values	World Bank	2000–2018
External Conflict	Avg. <i>intwar</i> score (int'l warfare magnitude)	MEPV dataset	2000–2018
Unitary	Dummy equal to 1 if unitary state	QoG	2000–2018
Nr. Languages (log)	Number of languages spoken (in log)	Ethnologue	Not time-varying
Absolute latitude (log)	Country's absolute latitude (log)	Laitin (2016)	Not time-varying
<i>Economic Characteristics</i>			
GDP per capita at independence (log)	GDP per capita at independence (1990 prices)	Laitin (2016)	Year of independence
GDP growth (%)	Annual percentage GDP growth (averaged)	World Bank	2000–2018
Arable land (log)	Amount of arable land (log-transformed)	Laitin (2016)	Not time-varying
Oil rents	Oil rents as % of GDP (averaged)	World Bank	2000–2018
<i>Historical Characteristics</i>			
British legal origin	Dummy equal to 1 if British legal system	Shleifer dataset	Not time-varying
French legal origin	Dummy equal to 1 if French legal system	Shleifer dataset	Not time-varying
Socialist legal origin	Dummy equal to 1 if Socialist legal system	Shleifer dataset	Not time-varying
Previous colony	Dummy equal to 1 if country was a colony	World Development dataset	Not time-varying

Data

This section introduces the dataset used in the empirical analysis. Section ‘Dependent variable: accountability’ details the dependent variables, while Section ‘Independent variable: Linguistic distance’ discusses the independent variable. The control variables are reported in Table 1 with further details in Section A1 of the Supplementary Material.

Dependent variable: accountability

Measuring accountability is challenging, particularly when examining it across multiple countries. To capture various dimensions of accountability, we use several measures from different sources.

The first variable is *Executive Constraints* (*xconst*) from the Polity 5 dataset.<sup>13</sup> This variable is widely used in the literature (Chandra and Rudra, 2015), and it captures the institutionalised constraints on the decision-making powers of chief executives, whether individuals or collectives.

The second and third variables are drawn from the V-Dem dataset.<sup>14</sup> These variables are the *Vertical Accountability index* (*v2x\_veracc*) and the *Diagonal Accountability index* (*v2x\_diagacc*). Both capture different aspects of accountability related to *Executive Constraints*. The *Vertical Accountability index*

<sup>13</sup>Source: [Link to Systemic Peace](#).

<sup>14</sup>Source: [Link to V-dem](#).



measures the extent to which citizens can hold the government accountable, such as through the ability to organise political parties freely or participate in free and fair elections. In contrast, the *Diagonal Accountability index* emphasises civil society rather than political institutions, assessing how citizens, civil society organisations, and independent media can hold the government accountable.

Lastly, we extract a fourth variable from the V-Dem dataset, called *Engaged Society* (v2dlengage). This variable is primarily concerned with public engagement and assesses the level of public involvement in the decision-making process, especially when significant policy changes are being considered. It measures how actively citizens and various societal groups shape policy outcomes and influence governmental decisions. This includes evaluating mechanisms for public consultation, the extent of civil society's input, and the effectiveness of platforms that allow for citizen feedback and participation in critical policy discussions.

All measures are at the country level, averaged over 2000–2018. This time frame was chosen for two main reasons. First, averaging helps address missing data by broadening coverage and improving reliability. Second, we avoid periods of major disruption, such as the COVID-19 pandemic or the Soviet Union's collapse, that could distort institutional dynamics. Excluding such events helps ensure a more stable and representative view of accountability. Other measures are listed in Table 2, with further details in Section 'Different measures of accountability'.

### Independent variable: Linguistic distance

To measure the distance from the official language, we employ the ADOL indicator, proposed by Laitin and Ramachandran (2016). This indicator measures the linguistic distance between language groups within a country and the official language. ADOL for a given country  $i$  is calculated as:

$$ADOL_i = \sum_{j=1}^n P_{ij} d_{jo}$$

where  $n$  represents the number of linguistic groups in the country,  $P_{ij}$  is the population share of the group  $j$  in country  $i$ . Finally,  $d_{jo}$  measures the distance of the language of group  $j$  from the official language  $o$ .

To assess the distance between two languages, the index, in line with existing literature (Fearon and Laitin, 2000; Fearon, 2003; Fearon and Laitin, 1999; Laitin, 2000), relies on linguistic trees. These tree diagrams classify the structural relationship between languages using nodes, which signify the evolutionary points of language development and differentiation. Formally, the linguistic distance between two languages is computed as:

$$d_{ij} = 1 - \left( \frac{\text{no. common nodes } ij}{1/2(\text{no. nodes language } i + \text{no. nodes language } j)} \right)^\lambda$$

Here,  $d_{ij}$  equals one when there are no common nodes between the two languages, signifying maximum difference. Conversely, the measure approaches zero as the Number of common nodes increases, indicating minimal difference. A value of  $\lambda$  equal to 0.5 is selected following Fearon (2003) and other studies.

Figure 1 shows the correlation between our accountability measures and linguistic distance at the country level. The scatterplots indicate that, despite considerable variation across countries, there is, on average, a negative correlation between accountability and ADOL.

It's worth noting that ADOL differs conceptually from the commonly used indices of linguistic diversity (Alesina *et al.*, 2003; Desmet *et al.*, 2009; Esteban *et al.*, 2012; Greenberg, 1956). ADOL focuses on the top-down relationship between the elite and the citizens. Ethnolinguistic fractionalisation (ELF) indices measure linguistic heterogeneity within the total population. To put it differently, while the first is concerned with the vertical relationship between the people and the ruling class, the second is about

Table 2. Summary statistics

	count	mean	sd	min	max
Executive Constraints	149	5.02	1.85	1.00	7.00
Vertical Accountability Index	149	0.66	0.70	−1.53	1.74
Diagonal accountability Index	149	0.69	0.85	−1.63	2.07
Reasoned justification	149	0.82	1.11	−2.11	3.73
Engage society	149	0.97	1.13	−2.13	3.25
Voice Accountability	149	−0.18	0.98	−2.09	1.62
Accountability Index	149	0.65	0.86	−1.77	2.03
ADOL	149	0.37	0.37	0.00	1.00
Pop (log)	149	16.34	1.44	13.44	21.01
GDP per capita at independence (log)	149	7.27	0.88	5.88	10.17
GDP growth (%)	149	3.98	1.93	−0.93	9.18
Arable land area (log)	148	9.88	1.97	2.23	14.38
Oil rents (% gdp)	149	0.04	0.10	0.00	0.49
External confl.	149	0.01	0.05	0.00	0.42
Unitary	148	0.50	0.28	0.00	0.68
Nr. languages (log)	149	2.85	1.03	0.69	5.98
Index of ELF. Calculated by Klaus et. al (2012)	133	0.47	0.31	0.00	0.96
British legal origin	149	0.28	0.45	0.00	1.00
French legal origin	149	0.45	0.50	0.00	1.00
Socialist legal origin	149	0.21	0.41	0.00	1.00
Previous colony	149	0.86	0.35	0.00	1.00
Absolute latitude (log)	149	2.98	0.96	0.00	4.16
Primary (%)	128	0.25	0.16	0.01	0.68
Secondary (%)	128	0.46	0.20	0.06	0.85
Tertiary (%)	128	0.15	0.12	0.00	0.59
ELF with distance	149	0.32	0.21	0.00	0.73
Observations	149				

diversity among the different groups that form the citizens of a country. Although these aspects may sometimes lead to similar dynamics, they also reflect distinct underlying forces.

For example, Argentina exhibits low values in both ADOL and linguistic fractionalisation due to the predominance of Spanish as the official language spoken by the majority. In contrast, Chad scores high on both indices, as it has two official languages (French and Modern Standard Arabic) and over 120 indigenous languages. Chadian Arabic, a vernacular variant, functions as a *lingua franca* and commercial language spoken by 40–60% of the population. French is widely spoken in major cities and among most men in the southern region, serving as the primary language of instruction (Ethnologue, 2023).

Conversely, Angola presents low linguistic fractionalisation but high ADOL, as Portuguese is the sole official language, while 46 other languages, mostly Bantu, are spoken. Six of these – Portuguese, Chokwe, Kikongo, Kimbundu, Oshiwambo, and Umbundu – hold institutional status (Ethnologue).

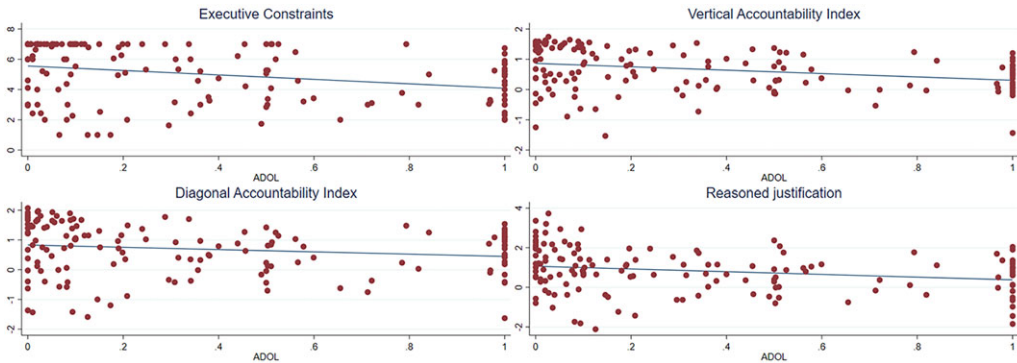


Figure 1. Relationship between accountability measures and ADOL.

A contrasting case is Lesotho, where the Constitution recognises two official languages (Sesotho and English). Sesotho is the first language of more than 90% of the population and is widely used for communication, whereas English is reserved for official interactions. Minority languages include Zulu, Phuthi, and Xhosa (Baker and Prys Jones, 1998).

Therefore, although ADOL captures a distinct concept from ELF indices, we also control for different measures of linguistic fractionalisation to understand how it may impact the relationship between ADOL and accountability.

In Table 1, we present all the control variables. For a more detailed description, please see Section A1 in the Supplementary Material.

Table 2 presents the summary statistics for our main variables. Some additional variables are also in this table, but they will be discussed in Sections ‘Robustness checks’ and ‘Potential mechanisms: education’.

### Empirical strategy & results

To empirically investigate the relationship between the distance between the official language and the languages spoken within a country and accountability, we use the following equation:

$$A_i = \alpha_0 + \alpha_1 ADOL_i + \alpha_2 X_i + \epsilon_i \quad (1)$$

where the index  $i$  represents different countries.  $A_i$  is the chosen measure of accountability (as shown in Section ‘Dependent variable: accountability’),  $ADOL_i$  refers to our proxy for linguistic distance, and  $X_i$  is a vector of controls, as discussed in Table 1. In Table 3, we present our main findings.<sup>15</sup>

The results show a negative and statistically significant relationship between distance from the official language and accountability. Specifically, greater linguistic distance is associated with lower levels of accountability across all the measures we examine. This finding also holds after accounting for control variables.<sup>16</sup>

In terms of the magnitude of the effect, the results indicate that a 1% increase in the ADOL corresponds to a 1.28% decrease in *Executive Constraints* (Column (2)). Similarly, a 1% increase in ADOL leads to a 0.61% decrease in the *Vertical Accountability Index* (Column (4)). Additionally, the

<sup>15</sup>In Section A2 of the Online Supplementary Material, we present the full regressions with the coefficients for all the control variables.

<sup>16</sup>Most variation is regional. Within regions, a negative relationship is found in East Asia and Europe and Central Asia, where it is mostly significant. We interpret this result as an indication that our measure of linguistic distance likely correlates with time-invariant regional characteristics, such as historical and cultural factors. Consequently, disentangling the effects of these factors on accountability from the effects of linguistic distance is challenging.

Table 3. Main results

dep. var.:	Executive		Vertical Accountability		Diagonal Accountability		Engage	
	Constraints		Index		Index		society	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ADOL	−1.470***	−1.278***	−0.558***	−0.610***	−0.383**	−0.512**	−0.589**	−0.814***
	(0.352)	(0.452)	(0.137)	(0.183)	(0.178)	(0.229)	(0.240)	(0.296)
	[−4.174]	[−2.827]	[−4.083]	[−3.339]	[−2.149]	[−2.236]	[−2.459]	[−2.753]
Observations	149	147	149	147	149	147	149	147
R2	0.0869	0.464	0.0885	0.445	0.0279	0.444	0.0378	0.373
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: robust standard errors in parentheses and t-statistics in brackets. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Controls includes: Pop (log), GDP per capita at independence (log), GDP growth (%), Arable Land area (log), Oil rents (% gdp), External confl., Unitary, Nr. languages (log), British Legal origin, French Legal origin, Socialist Legal origin, Previous Colony, Absolute latitude (log). All observations are at the country level.

*Diagonal Accountability Index* (Column (6)) shows a 0.51% decrease for each 1% increase in ADOL, and the *Engaged Society* index (Column (8)) decreases by 0.81% with a 1% increase in ADOL.

Robustness checks

To check the robustness of our results, we replicate the analysis in Eq. (1) using different proxies for accountability, our dependent variable (Section ‘Different measures of accountability’), and different measures of linguistic diversity, a key control in our analysis (Section ‘Different measures of linguistic diversity’). Further robustness checks are reported in the Supplementary Material.

Different measures of accountability

Measuring accountability is complex, and as discussed in Section ‘Dependent variable: accountability’, various indicators capture its different dimensions. To ensure the consistency of our results, we replicate the analysis using alternative dependent variables that represent distinct aspects of accountability. Specifically, we utilise three measures: *Voice & Accountability*, *Accountability Index*, and *Reasoned Justification*.

*Voice & Accountability* is taken from the World Governance Indicators<sup>17</sup> and measures perceptions of citizens’ ability to participate in government, along with freedoms of expression, association, and the media. Averaged at the country level from 2000 to 2018, the index ranges from -2.5 (low accountability, e.g., dictatorships) to +2.5 (high accountability, e.g., democracies).

*Accountability Index* and *reasoned justification* are average measures from V-Dem between 2000 and 2018. The first variable generalises the *Vertical Accountability Index* and *Diagonal Accountability Index*, interpreting accountability as constraints on government power through justification and sanctions. The second variable, *reasoned justification*, measures how political elites justify their positions on major political changes. The findings are presented in Table 4.<sup>18</sup>

Overall, the results in Table 4 are always negative and statistically significant and in line with Table 3. In terms of magnitude, an increase of 1% in ADOL generates a decrease of 0.9% in the

<sup>17</sup>Source: [Link to WGI](#).

<sup>18</sup>In Section A3 of the Supplementary Material, we present the full regressions with the coefficients for all the control variables.

**Table 4.** Robustness checks using alternative measures of accountability

dep. var.:	Voice & Accountability		Accountability Index		Reasoned Justification	
	(1)	(2)	(3)	(4)	(5)	(6)
ADOL	−0.933*** (0.180) [−5.189]	−0.895*** (0.203) [−4.408]	−0.559*** (0.174) [−3.222]	−0.672*** (0.221) [−3.036]	−0.687*** (0.233) [−2.944]	−0.572** (0.279) [−2.049]
Observations	149	147	149	147	149	147
R2	0.126	0.549	0.0590	0.470	0.0533	0.391
Controls	No	Yes	No	Yes	No	Yes

Notes: robust standard errors in parentheses and t-statistics in brackets. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Controls includes: *Pop (log)*, *GDP per capita at independence (log)*, *GDP growth (%)*, *Arable Land area (log)*, *Oil rents (% gdp)*, *External confl.*, *Unitary*, *Nr. languages (log)*, *British Legal origin*, *French Legal origin*, *Socialist Legal origin*, *Previous Colony*, *Absolute latitude (log)*. All observations are at the country level.

(average) *Voice & Accountability* (Column (2)), of 0.67% in the (average) *Accountability Index* (Column (4)), and of 0.57% in the (average) *Reasoned Justification* (Column (6)).

### Different measures of linguistic diversity

In our main model in Equation (1), we used the number of languages spoken in a country as our control for a country's linguistic diversity.<sup>19</sup> In this section, we substituted this proxy with an index of Ethno-Linguistic Fractionalisation (ELF with distance) collected from Laitin and Ramachandran (2016). This index measures the probability of two randomly chosen individuals speaking different languages in a country, including the linguistic distance between all ethnic group dyads in that country.<sup>20</sup> Results reported in Table 5 show that the relationship between the chosen measures of accountability and ADOL remains negative, in line with the main findings. Moreover, they are all statistically significant, except in Column (6), where the significance drops.<sup>21</sup>

In Section A4, we further check the robustness of our results using two alternative proxies for linguistic diversity: a standard ELF and the index of peripheral diversity by Desmet *et al.* (2005). The results, provided in Tables A4 and A5, are coherent with our hypothesis.

### Potential mechanisms: education

Here, we explore the role of education in mediating the relationship between linguistic distance and accountability. The connection between accountability and education is well-documented (e.g., Botero *et al.* (2013)). Numerous studies link education to critical elements of the accountability process, including political participation (Verba and Nie, 1987; Verba *et al.*, 1995), voting (Dee, 2004; Milligan *et al.*, 2004), government oversight (Reinikka and Svensson, 2004), and civic engagement (Glaeser *et al.*, 2007). We highlight that secondary and tertiary education can mitigate the negative effects of adopting an official language distant from the local languages.

This hypothesis is supported by evidence showing that in many multilingual countries, students begin receiving instruction in the official foreign language at the secondary level. Col (2024) reports that while children in some African countries initially receive instruction in their local languages, all

<sup>19</sup>To examine whether linguistic distance and diversity jointly affect accountability, we re-run our main model, also including an interaction term between ADOL and the number of languages. The ADOL coefficient is negative and significant, while the interaction term is positive but not significant.

<sup>20</sup>This measure is based on data on ethnic and linguistic groups by Fearon (2003).

<sup>21</sup>In Table A3 of the Supplementary Material, we present the full regressions with the coefficients for all the control variables.

**Table 5.** Robustness checks using ELF with distance

dep. var.:	Executive		Vertical Accountability		Diagonal Accountability		Engage	
	Constraints		Index		Index		society	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ADOL	−1.138**	−0.814*	−0.534***	−0.497**	−0.311	−0.308	−0.522*	−0.514*
	(0.446)	(0.476)	(0.168)	(0.202)	(0.213)	(0.229)	(0.278)	(0.282)
	[−2.548]	[−1.710]	[−3.180]	[−2.463]	[−1.458]	[−1.345]	[−1.877]	[−1.821]
ELF with distance	−1.034	−0.598	−0.076	0.219	−0.224	0.082	−0.209	0.194
	(0.856)	(0.768)	(0.296)	(0.266)	(0.379)	(0.325)	(0.495)	(0.437)
	[−1.209]	[−0.778]	[−0.257]	[0.823]	[−0.592]	[0.252]	[−0.421]	[0.445]
Observations	149	147	149	147	149	147	149	147
R2	0.0958	0.459	0.0889	0.422	0.0299	0.417	0.0388	0.336
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Notes: robust standard errors in parentheses and t-statistics in brackets. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Controls includes: *Pop (log)*, *GDP per capita at independence (log)*, *GDP growth (%)*, *Arable Land area (log)*, *Oil rents (% gdp)*, *External confl.*, *Unitary*, *Nr. languages (log)*, *British Legal origin*, *French Legal origin*, *Socialist Legal origin*, *Previous Colony*, *Absolute latitude (log)*. All observations are at the country level.

education from the secondary level onwards is conducted in the official foreign language. This pattern is also observed in former colonies in Asia, where historically, higher education was intended for a small elite group destined to become the country’s ruling class (Grier, 1999; Ingham, 1956; Isichei, 1995; Kelly, 2000b,d).

Given this evidence, we argue that educating students in the official language at the secondary and tertiary levels may influence both channels through which a distant official language harms accountability. First, as more individuals are educated in the official language, they gain greater access to information about elite behaviour, making it more usable. Second, learning in the official language implicitly transmits the culture embedded in it. This link has been explored in the literature on the effect of education in the official language on national identity. Blanc and Kubo (2024) show that in provinces where schools teaching in standard French were established in the 19th century, there is a stronger sense of national identity today than in other provinces. According to their study, education in standard French was crucial for shaping national identity.

To test this hypothesis, we include a series of educational measures from the dataset by Barro and Lee (2013) as controls. Specifically, we use the averages between 2000, 2005, and 2015 of the percentage of students attending primary, secondary, and tertiary education. Descriptive statistics for these variables are presented in Table 2, with data available only for 127 countries. In Table 6, we replicate the main analysis incorporating the various education measures.<sup>22</sup>

Overall, the results suggest that education plays a role in the relationship between linguistic distance and accountability, but this influence is not uniform across all levels of education. Specifically, when we include primary education in our models, the coefficients for ADOL remain statistically significant, indicating that primary education alone does not fully mitigate the negative effects of linguistic distance on accountability.

However, when we include the percentage of students attending secondary and tertiary education, the statistical significance of the ADOL coefficients diminishes. This loss of significance suggests that secondary and tertiary education might act as important mediators in the relationship between

<sup>22</sup>In Section A8 of the Supplementary Material, we present the regressions with the coefficients for all control variables.



Table 6. Possible mechanisms: education

dep. var.:	Executive				Vertical Accountability				Diagonal Accountability				Engage			
	Constraints				Index				Index				society			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
ADOL	−1.278*** (0.452) [−2.827]	−1.140** (0.481) [−2.369]	−0.618 (0.533) [−1.159]	−0.070 (0.555) [−0.126]	−0.610*** (0.183) [−3.339]	−0.493*** (0.171) [−2.883]	−0.332* (0.194) [−1.714]	−0.090 (0.202) [−0.444]	−0.512** (0.229) [−2.236]	−0.363* (0.216) [−1.680]	−0.206 (0.238) [−0.865]	0.021 (0.256) [0.082]	−0.814*** (0.296) [−2.753]	−0.456 (0.301) [−1.515]	−0.267 (0.320) [−0.834]	0.079 (0.340) [0.231]
Primary (%)		−0.684 (1.176) [−0.582]	0.923 (1.175) [0.786]	2.163* (1.241) [1.744]		−0.544 (0.447) [−1.217]	−0.048 (0.454) [−0.106]	0.499 (0.437) [1.143]		−0.715 (0.581) [−1.230]	−0.230 (0.563) [−0.409]	0.283 (0.574) [0.492]		−0.628 (0.806) [−0.780]	−0.045 (0.793) [−0.057]	0.736 (0.815) [0.903]
Secondary (%)			3.163*** (1.065) [2.969]	3.496*** (1.079) [3.239]			0.974** (0.388) [2.511]	1.122*** (0.380) [2.955]			0.953* (0.482) [1.976]	1.091** (0.498) [2.193]			1.147 (0.715) [1.605]	1.358* (0.742) [1.830]
Tertiary (%)				4.001*** (1.317) [3.038]			1.768*** (0.502) [3.521]				1.656** (0.644) [2.571]					2.520*** (0.937) [2.689]
Constant	7.109** (3.481) [2.042]	7.006* (3.656) [1.916]	5.424 (3.342) [1.623]	5.002 (3.277) [1.526]	0.855 (1.315) [0.650]	1.406 (1.514) [0.929]	0.919 (1.458) [0.630]	0.732 (1.434) [0.511]	1.898 (1.749) [1.085]	2.521 (1.915) [1.317]	2.045 (1.858) [1.100]	1.870 (1.829) [1.022]	1.569 (2.651) [0.592]	2.056 (2.925) [0.703]	1.482 (2.854) [0.519]	1.216 (2.788) [0.436]
Observations	147	126	126	126	147	126	126	126	147	126	126	126	147	126	126	126
R2	0.464	0.476	0.519	0.548	0.445	0.485	0.514	0.555	0.444	0.467	0.486	0.511	0.373	0.366	0.383	0.417
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: robust standard errors in parentheses and t-statistics in brackets. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Controls includes: Pop (log), GDP per capita at independence (log), GDP growth (%), Arable Land area (log), Oil rents (% gdp), External confl., Unitary, Nr. languages (log), British Legal origin, French Legal origin, Socialist Legal origin, Previous Colony, Absolute latitude (log). All observations are at the country level.

linguistic distance and accountability. In other words, as more individuals receive education at these higher levels, the negative impact of linguistic distance on accountability appears to weaken.

## Conclusions

This paper argues that the linguistic distance between a country's official language and the languages spoken by its citizens is one of the factors that affect accountability. A more distant language makes it harder to understand elite behaviour and the formal mechanisms for sanctioning it, while also hindering the development of shared cultural norms that constrain elite power. This relationship has historical roots, particularly in the processes of colonisation and decolonisation, during which the languages of former colonisers were often adopted as official languages in newly independent countries. Using a cross-sectional dataset of 147 countries, we document a negative association between linguistic distance and accountability which is robust across several model specifications. We suggest that secondary and tertiary education can help mitigate the negative effects of a linguistically distant official language.

Although the cross-sectional nature of the data leaves some unobservable factors unmodelled, the paper provides clear evidence of the relationship between official language and accountability, laying the groundwork for future research. Building on our findings, future work should explore whether the effect of a distant official language is driven by comprehension difficulties or by a cultural gap between the elite who speak the official language and the broader population. This distinction is particularly relevant given recent advances in AI-driven translation technologies. To this end, examining the effects of changes in language policy in specific contexts could shed light on the mechanisms underpinning the link between official language and accountability. Another promising research avenue involves investigating the factors that influence the choice of an official language, specifically whether linguistic distance reflects elite rent-seeking behaviour or represents a neutral compromise in linguistically diverse countries. The interplay between linguistic diversity and linguistic distance warrants further attention. In this regard, future research could examine more accurately the role of education in mediating the effects of these two dimensions.

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## References

- Albaugh E.A. (2014). *State-Building and Multilingual Education in Africa*. Cambridge University Press.
- Alesina A., Devleeschauwer A., Easterly W., Kurlat S., and Wacziarg R. (2003). Fractionalization. *Journal of Economic Growth* 8(2), 155–194.
- Alesina A. and Giuliano P. (2015). Culture and institutions. *Journal of Economic Literature* 53(4), 898–944.
- Austin J.L. (1962). *How to Do Things with Words*. London: Oxford University Press.
- Baker C. and Prys Jones S. (1998). *Encyclopedia of Bilingualism and Bilingual Education*. Multilingual Matters.
- Bakhtin M.M. (1981). *The Dialogic Imagination: Four Essays*. Austin: University of Texas Press.
- Barro R. and Lee J. (2013). Barro-Lee data set of educational attainment". In: *Population with at least secondary education. Barro-Lee. Seoul*. Available online at <https://www.barrolee.com/>, checked on 3.3, p. 2017.
- Bisin A., Patacchini E., Verdier T., and Zenou Y. (2011). Formation and persistence of oppositional identities. *European Economic Review* 55(8), 1046–1071.
- Bisin A. and Verdier T. (2017). On the joint evolution of culture and institutions. Tech. rep. National Bureau of Economic Research.
- Blanc G. and Kubo M. (2024). French. Working Paper 202401. Lewis Lab.

- Blouet O.M. (1990). Slavery and Freedom in the British West Indies, 1823-33: The Role of Education. *History of Education Quarterly* 30(4), 625–643.
- Botero J., Ponce A., and Shleifer A. (2013). Education, complaints, and accountability. *The Journal of Law and Economics* 56(4), 959–996.
- Bourdieu P. (1991). *Language and Symbolic Power*. Cambridge, MA: Harvard University Press.
- Brenneis D. and Macaulay R.K.S. (1996). *The Matrix of Language: Contemporary Linguistic Anthropology*. Boulder, CO: Westview Press.
- Cabrera L. (2024). Babel Fish Democracy? Prospects for addressing democratic language barriers through machine translation and interpretation. *American Journal of Political Science* 68(2), 767–782.
- Calvet L.-J. (1999). *La guerre des langues et les politiques linguistiques*. Paris: Hachette.
- Chandra S. and Rudra N. (2015). Reassessing the links between regime type and economic performance: Why some authoritarian regimes show stable growth and others do not. *British Journal of Political Science* 45(2), 253–285.
- Chen M.K. (2013). The effect of language on economic behavior: Evidence from savings rates, health behaviors, and retirement assets. *American Economic Review* 103(2), 690–731.
- Chomsky N. (1965). *Aspects of the Theory of Syntax*. Cambridge, MA: MIT Press.
- Chomsky N. (1986). Knowledge of Language: Its Nature, Origin and Use. New York: Praeger.
- Col, Mathilde (2024). *Unveiling the Global Determinants and Effects of Bilingual Education Policies in Africa*. Working Paper. [https://mathildecol.github.io/papers/descr\\_paper.pdf](https://mathildecol.github.io/papers/descr_paper.pdf).
- Davis W.E. (1985). Language and the justice system: problems and issues. *The Justice System Journal* 10, 353–364.
- Dee T.S. (2004). Are there civic returns to education? *Journal of public Economics* 88(9-10), 1697–1720.
- Desmet K., Ortuño Ortín I., and Weber S. (2005). Peripheral diversity and redistribution”. In.
- Desmet K., Ortuño-Ortín I., and Weber S. (2009). Linguistic diversity and redistribution. *Journal of the European Economic Association* 7(6), 1291–1318.
- Dissake E.M.K. (2022). Assessing litigant’s language proficiency: the case of the Bafoussam court of first instance. *Language Policy* 21(2), 217–234.
- Djité P.G. (2008). *The Sociolinguistics of Development in Africa*. Vol. 139. Multilingual Matters.
- Duranti A. (1997). *Linguistic Anthropology*. Cambridge, UK: Cambridge University Press.
- Easterly W. and Levine R. (1997). Africa’s growth tragedy: policies and ethnic divisions. *The Quarterly Journal of Economics* 112(4), 1203–1250.
- Eriksson K. (2014). Does the language of instruction in primary school affect later labour market outcomes? Evidence from South Africa. *Economic History of Developing Regions* 29(2), 311–335.
- Esteban J.M., Mayoral L., and Ray D. (2012). Ethnicity and conflict: An empirical study. *American Economic Review* 102(4), 1310–1342.
- Fearon J.D. (2003). Ethnic and cultural diversity by country. *Journal of Economic Growth* 8(2), 195–222.
- Fearon, J.D. and Laitin D.D. (1999). “Weak states, rough terrain, and largescale ethnic violence since 1945”. In: *Annual meetings of the American Political Science Association*. Atlanta, GA, pp. 2–5.
- Fearon James and David D. Laitin (2000). Ordinary language and external validity: Specifying concepts in the study of ethnicity. In: *Annual meeting of the American Political Science Association*. Washington, DC.
- Ferguson N. (2002). *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books.
- Ferraz C. and Finan F. (2008). Exposing corrupt politicians: the effects of Brazil’s publicly released audits on electoral outcomes. *The Quarterly journal of economics* 123(2), 703–745.
- Fouka V. (2020). Backlash: The unintended effects of language prohibition in US schools after World War I. *The Review of Economic Studies* 87(1), 204–239.
- Frankema E.H.P. (2012). The origins of formal education in sub-Saharan Africa: was British rule more benign? *European Review of Economic History* 16(4), 335–355.
- Furley O.W. and Watson T. (1978). *A History of Education in East Africa*. New York: NOK Publishers.
- Galor O., Özak Ö., and Sarid A. (2018). Geographical roots of the coevolution of cultural and linguistic traits. Tech. rep. National Bureau of Economic Research.
- Gavazza A. and Lizzeri A. (2009). Transparency and economic policy. *The Review of Economic Studies* 76(3), 1023–1048.
- Gay, V., Hicks D.L., Santacreu-Vasut E., and Shoham A. (2018). Decomposing culture: an analysis of gender, language, and labor supply in the household. *Review of Economics of the Household* 16, 879–909.
- Ginsburgh V. and Weber S. (2005). Language disenfranchisement in the European Union. *JCMS: Journal of Common Market Studies* 43(2), 273–286.
- Ginsburgh V. and Weber S. (2020). The economics of language. *Journal of Economic Literature* 58(2), 348–404.
- Glaeser E.L., Ponzetto G.A.M., and Shleifer A. (2007). Why does democracy need education? *Journal of economic growth* 12, 77–99.
- Goetz A.M. (2008). *Who answers to women?: gender and accountability*. United Nations Development Fund for Women.

- Gomes J.F. (2014). *The health costs of ethnic distance: evidence from Sub-Saharan Africa*. Tech. rep. 2014-33. ISER Working Paper Series.
- Greenberg J.H. (1956). The measurement of linguistic diversity. *Language* **32**(1), 109–115.
- Grier R. (1999). Colonial legacies and economic growth. *Public Choice* **98**(3-4), 317–335.
- Guiso L., Sapienza P., and Zingales L. (2015). Corporate culture, societal culture, and institutions. *American Economic Review* **105**(5), 336–339.
- Gumperz J.J. and Levinson S/C. (1996). *Rethinking Linguistic Relativity*. Cambridge, UK: Cambridge University Press.
- Hanks W.F. (1996). *Language and Communicative Practices*. Boulder, CO: Westview Press.
- Hicks D.L., Santacreu-Vasut E., and Shoham A. (2015). Does mother tongue make for women's work? Linguistics, household labor, and gender identity. *Journal of Economic Behavior & Organization* **110**, 19–44.
- Hill J.H. and Mannheim B. (1992). Language and world view. *Annual Review of Anthropology* **21**, 381–406.
- Ingham K. (1956). *Reformers in India 1793-1833: An Account of the Work of Christian Missionaries on Behalf of Social Reform*. Cambridge: Cambridge University Press.
- Isichei E. (1995). *A History of Christianity in Africa*. Grand Rapids, MI: William B. Eerdmans.
- Jain T. (2017). Common tongue: The impact of language on educational outcomes. *The Journal of Economic History* **77**(2), 473–510.
- Kaasa A. and Andriani L. (2022). Determinants of institutional trust: the role of cultural context. *Journal of Institutional Economics* **18**(1), 45–65.
- Kaschula R.H. and Ekkehard Wolff H. (2020). *The Transformative Power of Language: From Postcolonial to Knowledge Societies in Africa*. Cambridge University Press.
- Kashima E.S. and Kashima Y. (1998). Culture and language: the case of cultural dimensions and personal pronoun use. *Journal of Cross-Cultural Psychology* **29**(3), 461–486.
- Kelly G.P. (2000a). Colonial schools in Vietnam; policy and practice. In Kelly D. H. (ed), *French Colonial Education: Essays on Vietnam and West Africa*. New York: AMS Press, pp. 3–25.
- Kelly G.P. (2000b). Learning to be marginal: schooling in interwar French West Africa. In Kelly D. H. (ed), *French Colonial Education: Essays on Vietnam and West Africa*. New York: AMS Press, pp. 189–208.
- Kelly G.P. (2000c). The myth of educational planning: the case of the Indochinese University, 1906-1938. In Kelly D. H. (ed), *French Colonial Education: Essays on Vietnam and West Africa*. New York: AMS Press, pp. 27–43.
- Kelly G.P. (2000d). The presentation of indigenous society in the schools of French West Africa and Indochina, 1918 to 1938. In Kelly D. H. (ed), *French Colonial Education: Essays on Vietnam and West Africa*. New York: AMS Press, pp. 235–262.
- Kolstad I. and Wiig A. (2009). Is transparency the key to reducing corruption in resource-rich countries? *World Development* **37**(3), 521–532.
- Laitin D.D. and Ramachandran R. (2022). Linguistic diversity, official language choice and human capital. *Journal of Development Economics* **156**, 102811.
- Laitin D.D. (1989). Language policy and political strategy in India. *Policy Science* **22**, 415–436.
- Laitin D.D. (2000). What is a language community? *American Journal of Political Science* **44**(1), 142–155.
- Laitin D.D. and Ramachandran R. (2016). Language policy and human development. *American Political Science Review* **110**(3), 457–480.
- Laitin D.D. and Ramachandran R. (2025). The historical sources of language policy. *The Journal of Politics* **87**(3), 967–981.
- Licht A.N., Goldschmidt C., and Schwartz S.H. (2007). Culture rules: the foundations of the rule of law and other norms of governance. *Journal of Comparative Economics* **35**(4), 659–688.
- Luhrmann A., Marquardt K.L., and Mechkova V. (2020). Constraining governments: New indices of vertical, horizontal, and diagonal accountability. *American Political Science Review* **114**(3), 811–820.
- Manning P. (1998). *Francophone Sub-Saharan Africa: 1880-1995*. Cambridge: Cambridge University Press.
- McLaughlin E.S. (2015). Language policies and voter turnout-evidence from South Africa. *Journal of African Elections* **14**(2), 130–161.
- Melitz J. (2008). Language and foreign trade. *European Economic Review* **52**(4), 667–699.
- Milligan K., Moretti E., and Oreopoulos P. (2004). Does education improve citizenship? Evidence from the United States and the United Kingdom. *Journal of Public Economics* **88**(9–10), 1667–1695.
- Myers-Scotton C. (1993). Elite closure as a powerful language strategy: The African case. *International Journal of the Sociology of Language* **103**, 149–163.
- Nisbet R.E. (2003). *The Geography of Thought*. N. Brealey Publishing, London.
- North D.C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Ornstein J. (1964). Patterns of language planning in the New States. *World Politics* **17**(1), 40–49.
- Pogrebin M.R. and Poole E.D. (1990). Culture conflict and crime in the Korean-American community. *Criminal Justice Policy Review* **4**(1), 69–78.
- Ramachandran R. (2017). Language use in education and human capital formation: evidence from the Ethiopian educational reform. *World Development* **98**, 195–213.

- Reinikka R. and Svensson J. (2004). Local capture: evidence from a central government transfer program in Uganda. *The Quarterly Journal of Economics* 119(2), 679–705.
- Reinikka R. and Svensson J. (2005). Fighting corruption to improve schooling: Evidence from a newspaper campaign in Uganda. *Journal of the European Economic Association* 3(2-3), 259–267.
- Reinikka R. and Svensson J. (2011). The power of information in public services: evidence from education in Uganda. *Journal of Public Economics* 95(7-8), 956–966.
- Roy-Campbell Z.M. and Qorro M.A.S. (1997). Language crisis in Tanzania: The myth of English versus education”. In: (No Title).
- Santacreu-Vasut E., Shenkar O., and Shoham A. (2017). Linguistic gender marking and its international business ramifications. In: *Language in International Business: Developing a Field*, pp. 194–208.
- Santacreu-Vasut E., Shoham A., and Gay V. (2013). Do female/male distinctions in language matter? Evidence from gender political quotas. *Applied Economics Letters* 20(5), 495–498.
- Sapir E. (1985). *Culture, Language and Personality: Selected Essays*. Vol. 342. Univ of California Press.
- Saussure F.d. (1986). *Course in General Linguistics*. La Salle, IL: Open Court.
- Schedler, Andreas, Larry J. Diamond, and Marc F. Plattner, (eds.) (1999). *The Selfrestraining State: Power and Accountability in New Democracies*. Lynne Rienner Publishers.
- Schieffelin B.B. (1990). *The Give and Take of Everyday Life: Language Socialization of Kaluli Children*. Cambridge, UK: Cambridge University Press.
- Searle J.R. (1969). *Speech Acts: An Essay in the Philosophy of Language*. Cambridge, UK: Cambridge University Press.
- Selhausen F.M.z. (2019). Missions, Education and Conversion in Colonial Africa. In: Mitch D. and Cappelli G.. *Globalization and the Rise of Mass Education*. Palgrave Macmillan, pp. 25–59.
- Siachitema A.K. (1991). The social significance of language use and language choice in a Zambian urban setting: an empirical study of three neighbourhoods in Lusaka”. In Jenny Cheshire (ed), *English around the World: Sociolinguistic Perspectives*. Cambridge University Press, pp. 474–490.
- Spender D. (1980). *Man Made Language*. Boston: Routledge & Kegan Paul.
- Sputulnik D. (1996). The social circulation of media discourse and the mediation of communities. *Journal of Linguistic Anthropology* 6(2), 161–187.
- Spolsky B. (2017). Language policy in Portuguese colonies and successor states. *Current Issues in Language Planning* 19(1), 62–97.
- Spolsky B. (2018). Language policy in French colonies and after independence. *Current Issues in Language Planning* 19(3), 231–315.
- Sundkler B. and Steed C. (2000). *A History of the Church in Africa*. New York: Cambridge University Press.
- Tabellini G. (2010). Culture and institutions: economic development in the regions of Europe. *Journal of the European Economic Association* 8(4), 677–716.
- UNESCO (2009). UNESCO World Report: Investing in Cultural Diversity and Intercultural Dialogue. Tech. rep. Paris: UNESCO.
- Urbina M.G. (2004). Language barriers in the Wisconsin court system: The Latino/a experience. *Journal of Ethnicity in Criminal Justice* 2(1-2), 91–118.
- US Commission on Civil Rights (2018). *An Assessment of Minority Voting Rights Access in the United States: 2018 Statutory Report*. Tech. rep. U.S. Commission on Civil Rights. [https://www.usccr.gov/pubs/2018/Minority\\_Voting\\_Access\\_2018.pdf](https://www.usccr.gov/pubs/2018/Minority_Voting_Access_2018.pdf).
- Valencia Caicedo F. (2019). Missionaries in Latin America and Asia: A First Global Mass Education Wave”. In Mitch David and Cappelli Giovanni (eds), *Globalization and the Rise of Mass Education*. Palgrave Macmillan, pp. 61–97.
- Verba S. and Nie N.H. (1987). *Participation in America: Political Democracy and Social Equality*. University of Chicago Press.
- Verba S., Schlozman K.L., and Brady H.E. (1995). *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press.
- Webb V. (2002). *Language in South Africa: The Role of Language in National Transformation, Reconciliation and Development*. John Benjamins Publishing Company.
- Whorf B.L. (1956). Languages and logic. *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf*. MIT Press, pp. 233–245.
- Williams A. (2015). A global index of information transparency and accountability. *Journal of Comparative Economics* 43(3), 804–824.
- Zhang N. and Lee M.M. (2020). Literacy and State–Society Interactions in Nineteenth-Century France. *American Journal of Political Science* 64(4), 1001–1016.