
Populating an index of linguistic justice

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Abstract

This paper contributes to a broader project aimed at measuring linguistic justice across countries. In particular, it represents an empirical testing of the indicators drafted by Gazzola, Wickström and Fettes in their working paper “Towards an index of linguistic justice”, published in the Research Group “Economics, policy analysis, and language” of Ulster University in 2020. The fundamental goal of such a contribution is to provide practically a “feasible and theoretically grounded index of linguistic justice” (Gazzola, Wickström, and Fettes, 2020: 3). While the conceptual model behind the identification of the indicators is exhaustively discussed in the paper itself, the question of feasibility remains still open. Therefore, the purpose of this research is to provide a reflection on the implementation and population of the indicators developed by Gazzola, Wickström and Fettes. This paper is structured as follows: firstly, it will provide an analysis of the data availability and a commentary on the validity and the comparability of the ten indicators. Secondly, it will present the data collection for some of the indicators within a sample of countries. Finally, it will conclude with an overall reflection on the empirical testing and recommendations for further adjustments to the indicators.

Keywords: linguistic justice, composite indicators, language policy and planning

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1 Introduction

The concept of linguistic justice has been growing recognition within the academic community; with that, some academics (notably the authors of the working paper on which this project is based) have raised the issue of measurement and comparability of linguistic justice (Gazzola, Templin and Wickström, 2018; Grin and Fürst, 2022). This research indeed addresses the need for a practical and accessible tool to measure the level of linguistic justice. Like the Human Development Index, having an index that could provide a synthetic yet comprehensive picture of the level of linguistic equality of a country would be a great resource for policymakers. In addition, this would also allow broader “objective, systematic and conclusive comparisons arising from each language policy, including the relationships between majority and minority languages and even to grasp the effects of prohibiting a language” (Alcalde 2014: 6). The index can be used both to assess the current situation within a country or a region and to rank the states according to their performance. The need to investigate justice in linguistic matters originates from the awareness that countries cannot avoid having language policies (Gazzola, 2022). State entities provide public goods and services to their citizens and residents, delivered in one or more languages. The choices made by state actors in that regard outline the linguistic policies of that state. As with every choice, they may generate inequalities in the population. The focus on the effectiveness of policies and the idea of justice as fairness (rather than a focus on linguistic rights and identity studies under a constructivist approach) is justified by the need to obtain a tangible instrument for policy evaluation. The main object of analysis is the state (or state entities, namely also regional administration), which is the one in charge of implementing language policy, which can be more or less fair.

In order to achieve such a goal, this present paper tests the preliminary set of indicators proposed in the working paper “Towards an Index of Linguistic Justice”¹ (Gazzola, Wickström and Fettes, 2020). The ten indicators follow a “sufficientist” approach, namely the aim of identifying a minimum threshold of linguistic justice. Concerning the variables observed, the indicators aim at assessing the government language policy in three domains: law and order, public administration, and essential public services. Linguistic justice is evaluated for autochthonous minorities and allochthonous minorities (in particular, indicator 9 is formulated to address asylum-seekers). This inclusive approach is consistent with a general trend in accommodating strategies for different linguistic

¹ Please note that this analysis refers to the 2020 version of the paper, available on the website of the REAL- Research group “Economics and language” at the link: https://www.ulster.ac.uk/_data/assets/pdf_file/0011/677306/REAL20-1.pdf

minorities (De Schutter, 2022; Shorten, 2022). Hence, having this strong conceptual model as a basis, the goals of the present article are the following:

1. Populating the indicators: a) assessing if the data available is enough to feed the various indicators of the linguistic justice index, b) evaluating the accessibility of documents, and the presence of potential costs to obtain specific figures or documents.
2. Testing of the indicators: analyse the comparability and the validity of the indicators at state of the art.

The research includes a cross-country comparison of the data available within an initial sample of countries, together with a discussion on the process of obtaining said data. The following section illustrates the sample of countries selected for this preliminary testing and the motivations for such a choice.

2 Country Sample

The proposed sample consists of a maximum of ten countries: Belgium, Canada, Italy, Ireland, France, Spain, Switzerland, Romania, United Kingdom and the United States, which can be adapted in case of need. The group is relatively small; hence a thorough and systematic analysis of all the index indicators will be possible. The selection of the countries has been based on two factors:

1) *Linguistic diversity*:

Each of these countries presents a variegated demolinguistic composition, given by the historical minorities or indigenous people. In addition, most of these countries have experienced international migration, further diversifying the linguistic environment. In Table 1 (see 7 Appendix), the researcher has collected some rough data on the population of sample countries and the language spoken. Four (Belgium, Switzerland, Ireland and Canada) have more than one official language; three have official regional languages (Spain, Italy, and the United Kingdom), and most recognise linguistic rights to historical minorities or indigenous people, at least on paper. The challenge, in this case, will be to observe how much of those rights are promoted through inclusive language policy planning. Conversely, the United States does not have specific provisions regarding linguistic rights, although this might not result in exclusionary policies. In addition, most of the countries in this sample have experienced large migration flows, roughly depicted in the table. The larger migrant groups will be considered at the same level as historical minorities for this research. Namely, when counting the speakers of a certain language, the Urdu-speaking Pakistani population in the UK will be accounted for in the same way as the Catalan people in Spain.

2) *A democratic form of government*

All these countries are ruled by stable democratic governments that have signed and ratified most of the international conventions on the protection of human rights and minority rights; hence it can be safely inferred that the institutions of the state will be transparent in their actions are willing to display information in an accessible way (for this specific reason the research has decided to disregard countries such as Türkiye or the Russian Federation, for the time being);

In addition to these motivations, another reason to be added is that the countries selected have one or more official languages that the researcher can read, which will search for documents more accessible and more efficient.

3 Methodology

As stated before, the research will be based on the working paper by Gazzola, Wickström, and Fettes. *Table 1: Indicators of linguistic justice* (page 16) indicates the dimensions of linguistic justice and the indicators connected to those dimensions. The purpose of this paper is to address the actual possibility of populating the indicators with real data. In order to do that, it implied a systematic analysis of the documents indicated as potential sources of information in the paper by Gazzola, Wickström, and Fettes themselves. The systematic analysis has been carried out according to the guidelines of the Quick Scoping Review of the UK government (Collins *et al.*, 2015) and following Bowen's three phases of document analysis: 1) skimming (superficial examination in order to make an initial selection); 2) reading (examination of the document); 3) interpretation (Bowen, 2009: 33). The presence or not of the documents has been taken into account as primary data, and it has impacted as a measure of the availability of data. Moreover, the documents' content has been analysed through content analysis (Drisko and Maschi, 2016), scanning its validity to capture the phenomenon. A summary of the data collected has been organised in tables included in the **7 Appendix**.

As per the type of documents and the methodologies applied for the selection, the nature of the indicator has determined the scope of the data collection:

1. *Toleration indicators*: the main source, in this case, have been norms within domestic law (Constitutions and Bill of Rights), regional law (e.g. European Charter of Human Rights), as well as international law which the countries are party to (e.g. UN Declaration of Human Rights and the International Covenant on Civil and Political Rights). The research has been carried out by scanning the relevant documents and looking for keywords such as “language”, “minority rights”, “linguistic minorities”, and “non-discrimination”. Sampling has been

applied for indicator 2, where the research has focused on one specific case of regulations, namely those applied to labelling foodstuff.

2. *Accommodation indicators*: the documents analysed in this case have been mostly domestic legislative instruments and administrative acts and regulations collected from the websites and online archives of the relevant public agency. The jurisdiction level has been a crucial element in the analysis since acts regarding linguistic minorities tend to be adopted at a regional level rather than a national one – following the territoriality principle described by Van Parijs (Van Parijs, 2015).
3. *Compensation indicators*: the data also have been collected from public agencies. For indicator 9, linguistic landscaping research has been carried out via Google Maps Street View.
4. *Data on the population*: the number of speakers of different languages has been mostly derived from the official census, although this information is not always available.

There are various characteristics to be assessed in indicators (Lazarsfeld, 1962), but usually, the researchers focus on parameters belonging to four general areas: methodological soundness, integrity, serviceability and accessibility (Maggino, 2017: 108). A comprehensive analysis of these elements goes beyond the scope of the present research. Instead, this paper will focus on four parameters: 1) *availability*, namely the possibility of reporting the results in a relatively short amount of observation (e.g. looking at the availability of data); 2) *parsimony*, weighting the realistic efforts and resources in terms of data collection; 3) *comparability*, i.e. the discriminant power of the indicator, its capacity of recording differences and disparities among jurisdictions and groups; 4) *validity*, i.e. the appropriateness of the indicator to describe the phenomenon (Maggino, *ibidem*).

Each indicator of linguistic justice has been scanned for availability, parsimony, comparability and validity. In order to make the analysis easier, the parameters have been assigned a value on a scale according to the effectiveness of the indicator in that area.

Availability of data is indeed a crucial element to consider in the construction of a set of indicators (Maggino, 2017b, 2017a), but its accessibility is also a fundamental criterion -here is where the parsimony parameters come into place. Availability and parsimony are analysed together since they both refer to the data collection: the set of indicators require secondary data, mainly documents that are accessible to the general public - hence fairly easy to find and without any fee. Hence, the availability parameter measures the presence or absence of certain relevant documents and the accessibility and accuracy of the information contained. Of course, in this kind of analysis, the absence of documents is data itself: it might indicate a deliberate omission by the state or negligence

in language policy and planning (Bowen, 2009; Selvi, 2019). Although, the widespread inaccessibility of a kind of policy briefs, regulations or other documents might indicate that the indicator cannot be appropriately populated. If documents are available *in theory* but require fees or authorisation, then the effective application of the indicator on large samples might require large resources. The scale of the two parameters is constructed as follows:

Availability and Parsimony: Scale from 0 to 5

- 0 no secondary data is available;
- 1 some data is available but needs to be requested;
- 2 some data available, not homogenously among jurisdictions;
- 3 data is available and relatively easy to access, but not in all countries;
- 4 data is available and accessible in almost all jurisdictions;
- 5 data is accessible and available in all jurisdictions, enabling a full analysis.

The comparability parameter measures the discerning power of the indicators. If different jurisdictions all have the same value, which is not consistent with the literature or empirical evidence, then the indicator has little discerning power (Atkinson et al., 2002; Nardo et al., 2008). In this case, the focus lies on the value of the indicator scores rather than on the data collection. The scale of the parameter is constructed as follows:

Comparability: Scale from 0 to 3

- 0 no discerning power (all indicators across different jurisdictions score the same values);
- 1 some discerning power (small differences between the values not derived by the performance of the various jurisdictions);
- 2 discrete discerning power (some values are still aligned, but most of the jurisdictions score different values according to their performance);
- 3 significant discerning power (the data differ according to the jurisdiction's situations).

Lastly, validity refers to the linkage between the theory and the variables (Nardo *et al.*, 2008; Maggino, 2017). As stated by Atkinson *et al.*, translating policy goals into quantitative measures inevitably calls for a focus on certain aspects of the problem with the exclusion of others -nonetheless, indicators should still provide meaningful results that tell something about the problem analysed (Atkinson *et al.*, 2002). Hence, the validity parameter tests the consistency of the wording of the indicator with the conceptual model (Lazarsfeld, 1962) and its accuracy in evaluating the variable observed. The scale of the parameter is constructed as follows:

Validity: Scale from 0 to 3

- 0 the wording of the indicator does not effectively represent the variable observed;
- 1 the wording of the indicator somewhat represents the variable observed;
- 2 the wording of the indicator represents the variable, but there are still inconsistencies between different jurisdictions;
- 3 the wording of the indicator effectively represents the variable observed.

This rigorous evaluation matrix will be the base for assessing the indicators.

4 Analysis of the Indicators

4.1 Review of the Indicators

This section analyses each indicator one by one, according to the parameter presented hereabove, overviewing the nature and quality of data, reviewing the wording of the indicators, and providing recommendations for further development.

1. Absence of legislation or measures restricting the use of any language in the private life of residents in the jurisdiction examined

Availability and Parsimony: 5/5

Comparability: 0/3

Validity: 2/3

This indicator refers to the dimension of “toleration”, as discussed by Patten (2009), and represents the individual’s “capability of expressing themselves in their preferred language” (Gazzola, Wickström, and Fettes, 2020: 14). The indicator is constructed in negative terms, looking at the

absence of restricting or discriminatory legislation in the use of one language. The active prohibition or restriction of the use of a language in private life is not a practice of democratic countries: active prohibition of a language is frowned upon among the international community, as it would contradict the principle of non-discrimination.

The principle of non-discrimination based on language is also recognised under international law. The United Nations Universal Declaration of Human Rights² states, under Article 2, that “Everyone is entitled to all the rights and freedoms outlined in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or another opinion, national or social origin, property, birth or another status”. Similar wording is echoed by article 2 of the International Covenant on Civil and Political Rights³. Even among regional treaties, the principle of non-discrimination is clearly stated. Mention of non-discrimination based on language can be found under Article 1 of the American Convention on Human Rights (also known as the “Pact of San José”)⁴, Article 2 of the African Charter on Human and Peoples' Rights⁵ and Article 2 of the Association of Southeast Asian Nations (ASEAN) Human Rights Declaration⁶. In addition, the Charter of Fundamental Rights of the European Union, adopted in 2000 and made legally binding by the Treaty of Lisbon, prohibits discrimination on the grounds of language (Article 21) and places an obligation on the Union to respect linguistic diversity (Article 22). Therefore, active discriminatory policies in the EU would be challenged at the European Court of Justice. The fundamental treaties of the EU contain provisions encouraging the promotion of multilingualism. In particular, Article 165(2) of the Treaty on the Functioning of the European Union (TFEU) emphasises that ‘Union action shall be aimed at developing the European dimension in education, particularly through the teaching and dissemination of the languages of the Member States, while respecting and promoting cultural and linguistic diversity (Article 165(1) TFEU).

There are some historical examples of legislation restricting the use of language in public but also the private life of individuals. These measures are associated with authoritative governments or dictatorships: German in South Tyrol and French in the Aosta Valley was prohibited during the

² UN General Assembly resolution A/RES/217(III), “Universal Declaration of Human Rights”, 10 December 1948. URL: <https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/043/88/PDF/NR004388.pdf?OpenElement>

³ UN General Assembly resolution 2200A (XXI), “International Covenant on Civil and Political Rights” 16 December 1966. URL: <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>

⁴ “American Convention on Human Rights- Pact of San José”, 18 July 1978. URL: https://www.oas.org/dil/access_to_information/American_Convention_on_Human_Rights.pdf

⁵ African Commission on Human and Peoples' Rights, “African Charter on Human and Peoples' Rights”, 25 January 2005. URL <https://www.achpr.org/legalinstruments/detail?id=49>

⁶ ASEAN “Human Rights Declaration and Phnom Penh Statement on the Adoption of the ASEAN Human Rights Declaration”, February 2013. URL: https://asean.org/wp-content/uploads/2021/01/6_AHRD_Booklet.pdf

Fascist era. Similarly, Catalan was forbidden under Franco's rule. For more recent examples, the use of Kurdish in public was forbidden in Turkey until 1991. And even in Canada, the use of French in courts and schools was illegal until the Royal Commission on Bilingualism and Biculturalism (1963–1969). Restrictions on the use of language are more acceptable in the public sphere for reasons of efficiency. For instance, some countries have laws and regulations prohibiting the use of languages other than the official one in interactions with the public administration, except for special cases. Examples of those are represented by the 2001 Slovak Language Law, which made it illegal to use another language other than Slovak in the public sphere (Schöpflin, 2009), or the 1994 Toubon Law (Law 94-665), which made illegal the official communication in languages other than French in France.

At the time being, the sample of countries selected does not contain any legislation or measures restricting the use of any language in the private life of residents. Therefore, indicator 1 would have assumed a 0 value for all the sample countries. According to the information discussed hereabove, this is likely to be a global trend. Despite being quite valid in describing the phenomenon, indicator 1, in its current formulation, might not have enough discerning power.

2. Absence of legislation or measures forbidding the written public use of any language by businesses provided that a translation in the local dominant language is available

Availability and Parsimony: 5/5

Comparability: 2/3

Validity: 3/3

The indicator seeks to investigate the absence of restrictions on the use of languages different from the dominant one in businesses, hence the private sector. Since the wording of the indicator itself is quite broad, it is worth addressing one specific case to effectively assess the presence or not of such restrictions. A good measure would be the regulations on the languages on labels for foodstuff. These norms and legislations are public and easily accessible in the archives of governmental health and safety or trade agencies. An overview of the data collected in the sample of countries is discussed in the sections below.

Overall, this indicator scores very high values in all the parameters. To further increase its validity, a second set of goods could be useful: for instance, labels for pharmaceutical products could be an interesting example. There is indeed some research on the impact of multilingual labels (Zargarzadeh and Law, 2011) and the role of language in pharmaceutical care (Phokeo and Hyman, 2007). The results of the preliminary data collection on the sample of countries

3. Existence of the right to of assistance in one's first language during trials in criminal procedures

Availability and Parsimony: 5/5

Comparability: 0/3

Validity: 0/3

The indicator seeks to investigate the presence or not of the right of assistance in one's first language during criminal trials. However, it is understood that being able to comprehend a criminal procedure, being a defendant or victim, juridically falls under the right of a fair trial. Indeed, the definition of a fair trial, according to the Council of Europe, under a right to a fair trial, the party involved should be given "all the relevant information"; this implies that such information has to be delivered in a way that is accessible for the party involved, including communicating it in a language that they would understand. Amnesty International states that the right to an interpreter or a translator is a fundamental element of the right to a fair trial and that anyone charged with a criminal offence has the right to a competent interpreter, free of charge, in case they do not understand or speak the language used in courts (*AI POL 30/001/2002 - The right to a fair trial*, 2002). The right to a fair trial is part of the fundamental rights guaranteed under the major international legal instruments, such as the UN Declaration of Human Rights (Article 10), the International Covenant on Civil and Political Rights (Article 14), the European Convention on Human Rights (Article 6), and the Charter of Fundamental Rights of the European Union (Article 47), and domestic provisions of various countries. Like the principle of non-discrimination, the presence of this right is intrinsic within the definition of a democratic state. Even countries that do not enforce these rights and freedoms are still formally party to the international conventions. Hence, at the state of the art, the indicator cannot be considered valid to identify and describe linguistic justice in the judicial system.

4. Proportion of centres for asylum seekers in the jurisdiction examined employing staff or linguistic mediators fluent in at least one non-official language relevant for the asylum seekers (corrected for the total number of asylum seekers and the total population of the country)

Availability and Parsimony: 0/5

Comparability: 3/3

Validity: 2/3

The indicator seeks to analyse the level of linguistic justice regarding new minorities, particularly asylum-seekers. Including this category in the index is crucial, and it follows a general trend in the field of increased attention towards allochthonous and vulnerable minorities.

Nonetheless, the current formulation of the indicator falls short of data availability. In theory, the languages spoken by staff and linguistic mediators within reception centres would be a great measure to assess the inclusion of the group within the society and the effective access to public services - including especially legal procedures related to the asylum. However, reception centres are more than often run by independent agencies and NGOs, even if funded by governments. For instance, in Italy and Greece, most of the “hotspots”, the reception centres of the first port of arrival, are managed by UNHCR, the Red Cross or other local non-governmental agencies. The same applies even to the second-degree reception centres, meaning the structures that should host the asylum-seekers until their asylum hearing. In the UK, the refugees are mostly kept in hotels or hostels, not hotspots like in Mediterranean countries. The staff managing the asylum proceedings and the structure are part of two different organisations. While in the USA, reception centres on the European models do not exist; people are mostly taken to detention centres run by US Immigration and Customs Enforcement. Because of the multiplicity of actors involved, it is impossible to easily access the languages spoken by the staff or mediators because of privacy purposes. For the indicator to be fed, there should be a direct inquiry asking to access the CV of the personnel or a case study with interviews and surveys to administer to a sample of reception centre staff members. While this analysis is quite feasible, it requires a large amount of resources and time. It would create a gap between the different indicators, with the present one being fed by primary data and the others based on secondary data. Hence, the parameter of proximity and availability have a null value. In terms of comparability and validity, theoretically, the wording of the indicator would be a very effective representation of the problem, and it would ideally capture the differences between jurisdictions. However, the shortcomings in the data collection make it impossible to assess the effective applicability of the measure. Section 7 proposes some suggestions to improve this indicator.

5. Aggregate indicator of recognition of languages traditional minorities. Potential implementation of explicit legal or administrative rights such as to receive official information and to address and receive answers from authorities in one’s first language

Availability and Parsimony: 5/5

Comparability: 3/3

Validity: 3/3

This indicator is set to investigate the presence of norms which allow autochthonous/ traditional minorities to interact with state agencies in their preferred language. Gazzola, Wickström, and Fettes mention that language in communication with local authorities carries both symbolic and practical importance, even if the speakers are proficient in the local dominant language (*idem*: 15). This indicator is “systemic” since it addresses the explicit formal legal and administrative status of the minority languages (*ibidem*).

Concerning validity and parsimony, the data on this kind of legislation is usually quite easily available and accessible on official websites. According to the jurisdiction examined, information can be collected in Constitutions, autonomy statutes, and regional legislation. The values scored by the different jurisdictions are based on their performance, namely the presence of not of these provisions. This indicator’s results are very solid in terms of comparability and validity. Moreover, the wording of the indicator itself perfectly captures the variable observed.

This indicator has also been empirically tested on the country sample, and an overview of the result is presented in the following section.

6. Aggregate indicator of recognition of languages of “new” minorities. Potential implementation of explicit legal or administrative rights such as to receive official information and to address and receive answers from authorities in one’s first language

Availability and Parsimony: 2/5

Comparability: 3/3

Validity: 1/3

Indicator 6 has the same rationale as indicator 5 but targets allochthonous or “new” minorities. Despite the wording and the underpinning conceptual model similarities, this indicator presents some significant methodological challenges. Indeed, traditional minorities are protected by numerous international conventions (e.g. Framework Convention for the Protection of National Minorities, Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities). This results in the adoption of domestic provisions in order to adhere to international obligations for most countries. In addition to that, the rights of traditional minorities have been included in peace treaties (e.g. Treaty of Osimo). Hence they are granted a higher recognition within the legal framework of the various countries. This results in more extensive protection and promotion strategies than new minorities, who do not benefit from this legal background and tradition (Medda-Windischer, 2010; Wisthaler and Öst, 2014).

Regarding language policy, implementing provisions to include new linguistic minorities are rarely part of systematic planning, but they are more case-specific. In jurisdictions with a large presence of allochthonous minorities, the government might decide to take some actions, but in some specific areas. For instance, municipalities might provide some services with the help of an interpreter, but it is almost impossible to see these provisions at a national or even a regional level. However, a general provision stating that people speaking Albanian can address and receive information from the Italian tax office or that Arabic speakers in France can apply for public housing in Paris with a form in Arabic. In terms of comparability and validity, this indicator is sound. However, the data collection would require additional resources and efforts since it would focus on the micro rather than macro level.

7. Proportion of legally binding documents such as laws and regulations published online per year in the languages spoken in the jurisdiction examined (weighted across individuals and the indicator of recognition of the individual languages)

Availability and Parsimony: 5/5

Comparability: 3/3

Validity: 0/3

This indicator reflects the potential implementation of formal legal and administrative rights. It represents the actual implementation of the recognition identified by Indicator 5. In terms of data, the official websites of the various gazettes and bulletins where laws are published are public and easily accessible without any restriction or fee. In terms of comparability, the indicator reflects the performance of the countries analysed, showing significant discerning power among the jurisdictions.

Overall, this indicator does not add much to the analysis. However, in terms of validity, there are some questions to be answered: firstly, countries that scored positive values in indicator 5 also showed the same pattern. This is probably derived from the fact that the recognition of linguistic rights of traditional minorities follows a territoriality principle: the jurisdiction where these minorities are most present is the one that performs better. If we look at national legislation, there are very few countries that include multilingual legislation. Although when looking at autonomous regions that have been allocated a special status due to the presence of linguistic minorities, the laws are all published in the language of the traditional minority.

Secondly, the goal of the indicator itself seems counterintuitive for the system of indicators: in fact, the main purpose would be to guarantee access to lawyers, citizens and advocacy groups to an official registry for authoritative versions of law and regulation in any given language (Gazzola, Wickström,

and Fettes, 2020: 16). However, access to legislation for legal purposes is already covered under indicator 3 (and 4, to some extent). In federal multilingual countries and bilingual autonomous regions, all laws are available in the language of the minority due to the official status of the language. Therefore, in this case, indicators 3 and 7 overlap. The question arises whenever addressing smaller minorities, but if that is the rationale behind the indicator, perhaps an additional specification would be needed.

Moreover, the wording reads more like an indicator of political vitality and the effective work of the legislative authorities within the jurisdiction. Even within the same country, some regions might have adopted fewer laws or administrative acts one year due to political impasse. For example, consider two regions that have a significant presence of traditional linguistic minorities: the first region has an effective government and adopts 20 new laws and acts in a year. In contrast, the second region adopts only 10 but then suffers a government crisis and it's forced to an anticipated election, stalling the legislative work. The first region would have 20 documents in the language of the minority, while the second has only 10. But this is not an indication of the effective recognition and promotion of the linguistic rights of the minority; it is instead an evaluation of the proficient functioning of the legislative bodies. The indicator, as it is framed now, would lead to biased results based on the vivacity of the local or national government rather than on linguistic rights.

8. Proportion administrative forms of the tax office and the population registry released/published online per year in the languages spoken of the jurisdiction examined (weighted across individuals and the indicator of recognition of the individual languages)

Availability and Parsimony: 5/5

Comparability: 3/3

Validity: 3/3

This indicator evaluates the presence or absence of tax forms as a form of nonrival and nonspatial good, which can be easily provided without extra costs. In terms of validity, the wording of the indicator is very straightforward, and it effectively encompasses the variable.

Moreover, from the exploratory data collection, it emerged that data is easily available and accessible on the websites of the revenue agencies of various countries. The results obtained are also different according to the specific performance of the single countries, from which the indicator has significant discriminating power.

9. Proportion of road signs available in the languages of the jurisdiction examined (weighted across citizens, the indicator of recognition of the individual languages, and administrative sub-units)

Availability and Parsimony: 4/5

Comparability: 3/3

Validity: 3/3

In terms of data, there are various tools that can help the researcher to collect information without having to go on the field, in particular projects on linguistic landscaping that include pictures, such as Lingscape⁷ and LinguaSnapp⁸. Another instrument that can be used to populate the index is Google Maps Street View. This indicator fits both requirements of validity and comparability due to its highly specific linguistic landscaping analysis.

Taking a sample of cities and several screenshots, we can have a quite accurate idea of the linguistic landscaping of that jurisdiction. However, one problem with this tool is that Google does not update the images consistently. For instance, in Switzerland, the last camera shoot was in 2015, while in Italy, the United Kingdom and Canada, the latest update was in September 2022. The discrepancies in the timeframe question the reliability of this instrument. On the other hand, road signs are not something that changes frequently. Hence this time difference could just be acknowledged in the limitations of the indicator.

Overall, this indicator has high values in all the relevant parameters.

10. Proportion of public hospitals and clinics in which consultations are available in the languages of the jurisdiction examined (weighted across citizens, the indicator of recognition of the individual languages, and administrative sub-units)

Availability and Parsimony: 2/5

Comparability: 3/3

Validity: 2/3

This indicator represents the implementation of the recognition of linguistic rights within essential services, more specifically, the healthcare sector. This indicator presents some issues when collecting data: the main issue arises from searching for general rules and regulations on multilingual health communication or the effective practice in hospitals and clinics.

⁷ Online portal of Lingscape: <https://lingscape.uni.lu/>

⁸ LinguaSnapp, the app created by the Multilingual Manchester <http://mlm.humanities.manchester.ac.uk/linguasnapp/>

In fact, at a legal level, secondary data can be collected by looking at the norms on minority rights. There are indeed hospital regulations and regional norms outlining the bilingual requirement in bilingual jurisdiction with the presence of traditional minorities. However, jurisdictions which have officially recognised the linguistic rights of the traditional minorities are more likely to require bilingual medical personnel (e.g. German-Italian in South Tyrol and Spanish-Basque in the Basque Country). Hence, in terms of validity, the indicator is sound but does not score the maximum value because, from a legal perspective, this is already intrinsic in minority rights.

However, if we want to assess the effective implementation of this right, there might be significant discrepancies. In addition to that, focusing on the implementation would also include allochthonous minorities who do not benefit from the rights of the traditional ones.

Nonetheless, the focus on the implementation poses more methodological challenges: based on secondary data only; this is possible only by looking at some sample hospitals or clinics in specific jurisdictions which have made their regulations around multilingual communication public. Moreover, hospitals generally do not make the medical personnel's CVs public, which complicates data collection. Section 7 proposes some suggestions to improve this indicator.

4.2 Overview of the Indicators' Values

Table 1 provides a summary of the values of the parameters examined for each indicator. Most of the indicators have scored high values in terms of availability and parsimony, meaning that the data is available and easily accessible. Only indicator 4 and presents significant logistical challenges with the data collection, and indicators 6 and 10 would need to be revised in order to access to quality and readily available data. Regarding comparability, only indicators 1 and 3 have no discerning power, which means that all indicators across different jurisdictions would score the same values. Concerning instead the validity, the wording of most of the indicators effectively portray the phenomenon examined, with the exception of indicator 7 which would need to be rephrased in order to provide an appropriate answer to the question. Overall, the matrix of indicators shows very promising results, and only few measures need significant work. The provisional index of linguistic justice resulting by the aggregation of these instruments is likely to present an accurate picture of the state of the art of language policy and planning in the jurisdictions examined.

In the following section, the indicators that scored the highest values will be empirically tested to provide an additional validation to the theoretical analysis.

Indicator	Availability and Parsimony	Comparability	Validity
1. Absence of legislation or measures restricting the use of any language in the private life of residents in the jurisdiction examined	5/5	0/3	2/3
2. Absence of legislation or measures forbidding the written public use of any language by businesses provided that a translation in the local dominant language is available	5/5	2/3	3/3
3. Existence of the right to of assistance in one's first language during trials in criminal procedures	5/5	0/3	0/3
4. Proportion of centres for asylum seekers in the jurisdiction examined employing staff or linguistic mediators fluent in at least one non-official language relevant for the asylum seekers (corrected for the total number of asylum seekers and the total population of the country)	0/5	3/3	2/3
5. Aggregate indicator of recognition of languages traditional minorities. Potential implementation of explicit legal or administrative rights such as to receive official information and to address and receive answers from authorities in one's first language	5/5	3/3	3/3
6. Aggregate indicator of recognition of languages of "new" minorities. Potential implementation of explicit legal or administrative rights such as to receive official information and to address and receive answers from authorities in one's first language	2/5	3/3	1/3
7. Proportion of legally binding documents such as laws and regulations published online per year in the languages spoken in the jurisdiction examined (weighted across individuals and the indicator of recognition of the individual languages)	5/5	3/3	0/3
8. Proportion administrative forms of the tax office and the population registry released/published online per year in the languages spoken of the jurisdiction examined (weighted across individuals and the indicator of recognition of the individual languages)	5/5	3/3	3/3
9. Proportion of road signs available in the languages of the jurisdiction examined (weighted across citizens, the indicator of recognition of the individual languages, and administrative sub-units)	4/5	3/3	3/3
10. Proportion of public hospitals and clinics in which consultations are available in the languages of the jurisdiction examined (weighted across citizens, the indicator of recognition of the individual languages, and administrative sub-units)	2/5	3/3	2/3

Table 1 Summary of Indicators' Values

5 Populating the Indicators

The tables below represent a preliminary investigation of the data collection to populate the index of linguistic justice. The indicators analysed in this sense are the ones that displayed the highest values in terms of availability, parsimony, comparability and validity.

The sample of countries analysed includes member states of the European Union (Belgium, Italy, the Republic of Ireland, Romania and Spain), countries who have a bilateral agreement with the Union or were previously part of the Union itself (Switzerland and the United Kingdom), as well as countries from North America (Canada and the United States of America).

2 Absence of legislation or measures forbidding the written public use of any language by businesses provided that a translation in the local dominant language is available

E.g.: Languages on the foodstuff labels

Country	Languages that must be used on labels
Belgium*	“at least” French, Dutch and German
Canada	Mandatory information: English and French <i>Law 206, Safe Food for Canadians Regulations (SFCR); B.01.012(2), Food and Drug Regulations (FDR)</i> <i>Charter of the French Language</i> <i>Québec Bill 96 2022</i>
Italy*	Obligatory in Italian Multilingual labels are allowed <i>DECRETO LEGISLATIVO 15 December 2017, n. 231</i>
Ireland (Republic of)*	English Language other than English, including Irish, are allowed <i>FSAI Guidance Note No. 29- The Use of Food Marketing Terms</i>
France*	French Multilingual labels are acceptable with limitations <i>Toubon Law</i> <i>Code de la consommation- Titre Ier : INFORMATION DES CONSOMMATEURS</i>
Spain*	Spanish <i>Real Decreto 930/1992</i> Catalan in Catalonia

	<i>Article 128-1, Chapter 8 of Law 22/2010 of July 20 of Codi de Cosum de Catalunya</i>
Romania*	Romanian Other languages allowed
Switzerland*	German, Italian, French <i>Federal Act on Product Safety</i> Switzerland also adheres to EU standards ⁹
United Kingdom	English Other languages may be used on food labels, but only in addition to the English language ¹⁰ (Bilingual English Welsh not compulsory)
United States of America	English

Table 2 Indicator 2

*In compliance with article 175 of the EU Decree N. 1169/2011

The data analysed in this case derives mainly from health and safety agencies of the single countries and the body of legislation of the European Union. The table includes the legislative references and the languages required by law to be included on the labels of foodstuff products.

Most countries allow the use of languages different from the dominant ones in labels, provided that the essential information is available in most official languages. Multilingual federal states like Belgium and Switzerland require the use of the language of the minority living in a specific region to be the primary one showcased in labels (French in the French Swiss Canton, Dutch in the Flanders in Belgium). A newly approved Belgian law (July 2022) clearly states that “must at least appear in the language or languages of the linguistic region where the products are placed on the market”.

However, in Italy, bilingual labels in the autonomous regions are not regulated by law: German labels on foodstuff in South Tyrol are not prohibited, but the inclusion of Italian is compulsory. A similar situation is true for Spain, where Catalan and Basque are allowed but not required by law.

In Romania, other languages are allowed in compliance with EU regulations. Moreover, *Law 500/2004* specifies that the labelling and the instructions for use concerning foreign products sold in Romania are to be accompanied by a translation into Romanian. Similarly, in Ireland, the *FSAI*

⁹ Information on the regulations available at:

<https://www.seco.admin.ch/seco/it/home/Arbeit/Arbeitsbedingungen/Produktsicherheit.html>

¹⁰ UK government regulations available at: <https://www.gov.uk/product-labelling-the-law>

Guidance Note No. 29- The Use of Food Marketing Terms states that the primary language should be English, but additional languages, including Irish, are allowed.

In Canada, non-mandatory information must be shown in English and French. According to *Law 206*, languages other than English and French may appear on a label on condition that the compulsory information is shown in the two official languages. Moreover, in Québec, the primary language of the labels is French: according to *Bill 96*, adopted by Québec's National Assembly in May 2022, a language other than French may also be used, provided that no inscription in the other language is given greater prominence to those written in French. In the US, FDA regulations¹¹ provide that All labelling shall be in English, except for products distributed solely within Puerto Rico or a US territory where the predominant language is other than English.

For EU member states, the *Regulation (EU.) No 1169/2011* requires that mandatory food information shall appear in a language easily understood by the consumers of the country where such food is marketed. Moreover, article 15 of the Regulation leaves it up to the Member States to impose on their territory that the information appears “*in one or more languages [...] among the official languages of the Union*”.

Labelling has been a highly discussed topic, especially within the European Union: the EU Court of Justice debated the requirement of the use of the main language spoken in one country as an obstacle to trade in the case of *Cassis de Dijon*¹². However, the judge ruled that these obstacles were justified on the protection of consumers. Some member states presented restrictive regulations and had to adhere to EU law after joining the Union. For instance, the *Republic of Latvia Languages Law (1992)* established positive discrimination in favour of Latvian. All labelling and instructions for products produced in Latvia must be only written in Latvian, and it cannot appear beside other languages. Although after joining the EU, Latvia had to change the regulations by including a clause stating that in the event that there is another language, Latvian should occupy a *preferential* position, banning *de facto* monolingual labels.

¹¹ Food and Drugs Agency regulations available at: <https://www.fda.gov/medical-devices/device-labeling/general-device-labeling-requirements#:~:text=Existing%20label%20space%20is%20not%20used%20for%20any%20representations%20in,language%20is%20other%20than%20English.>

¹² Judgment of the Court of 20 February 1979. *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein*. Reference for a preliminary ruling: *Hessisches Finanzgericht - Germany*. Measures having an effect equivalent to quantitative restrictions. Case 120/78.

5 Aggregate indicator of recognition of languages traditional minorities. Potential implementation of explicit legal or administrative rights such as to receive official information and to address and receive answers from authorities in one's first language

Country	Data
Belgium	Dutch, German, French <i>Article 4, 189 of the Constitution</i>
Canada	French <i>Official Language Act</i> <i>Canadian Charter of Rights and Freedom</i>
Italy	Albanian, Catalan, German, Greek, Slovene, Croatian, French, Franco-Provençal, Friulian, Ladin, Occitan and Sardinian <i>Law 482/1999</i> <i>Autonomy Statute Aosta Valley</i> <i>Autonomy Statute Trentino-Alto Adige</i> <i>Autonomy Statute Friuli-Venezia Giulia</i>
Ireland (Republic of)	NA
France	NA
Spain	Basque, Catalan, Galician, Valencian <i>1982 Language Standardization Law in País Vasco</i> <i>1986 Language Standardisation Law of Euskara in Navarra</i> <i>1979 Statute of Autonomy Generalitat de Catalunya</i> <i>1983 Catalanian Linguistic Normalization Law in Catalonia</i> <i>1981 Galician Autonomy Statute of 1981 in Galicia</i> <i>1982 Valencia Statute of Autonomy</i>
Romania	(Hungarian, Romani, Ukrainian, German, Russian, Turkish, Tatar, Serbian, Slovak, Bulgarian) <i>Article 19 of the Law of the local public administration no. 215/2001</i>
Switzerland	German, French, Italian, and Romansh <i>Article 109 of the 1848 Constitution</i>
United Kingdom	English, Welsh <i>Welsh Language Act 1993</i> <i>Welsh Language Measures (Wales) 2011</i> <i>Gaelic Language Act (Scotland) 2005</i>
United States of America	NA

Table 3 Indicator 5

The data collection for this indicator focused on fundamental documents such as the Constitution, Bill of Rights and Charter of Human Rights, as well as specific legislation on the protection of the rights of minorities. As seen in indicator 2, there are some differences related to the form of government of the various countries.

Multilingual federal states like Belgium and Switzerland apply the territoriality principle, dividing the countries into sub-national entities where the language of the minority is the language of the majority of the population living there. More specifically, under article 4 of the Constitution, Belgium comprises four linguistic regions: the Dutch-speaking region, the French-speaking region, the bilingual region of Brussels-Capital and the German-speaking region. Article 189 further specifies that the official languages of the countries with equal status are French, Dutch and German. Similarly, German, French, and Italian are official languages in Switzerland. Members of Switzerland's linguistic minorities are recognised as national minorities, i.e. Italian, Romansh and French speakers at the national level, French speakers in the canton of Bern, and German speakers in the cantons of Fribourg and Valais. Article 109 of the 1848 Constitution states: "The three main spoken languages in Switzerland, German, French and Italian, are the national languages of the Confederation". In Canada, the *Official Languages Act* regulates bilingualism (English and French) in the federal public service. Moreover, the *Canadian Charter of Rights and Freedoms* states that English and French are the country's official languages, with equal status (Section 16), and it regulates the use of languages in public services, especially education (Section 17-23).

A different situation can be observed for non-federal states. In Italy and Spain, where some regions are granted a high degree of autonomy, the use of a minority language is mostly regulated at a regional level. Italy has a national legislative instrument (Law 482/1999) that recognises twelve linguistic groups. However, the more specific provisions on implementing such rights are contained in the autonomy statutes of the regions of Aosta Valley, Trentino Alto Adige, and Friuli Venezia Giulia. In Spain, the use of the minority languages is regulated by regional laws which make the use of Spanish and the minority languages co-official: 1) for the Basque: 1982 Language Standardization Law in País Vasco and 1986 Ley Foral del Euskera in Navarra; 2) for Catalan: the 1979 Statute of Autonomy Generalitat de Catalunya and the 1983 Catalan Linguistic Normalization Law in Catalonia; 3) for Galician: Galician Autonomy Statute of 1981 in Galicia; 4) for Valencian: Valencia's 1982 Statute of Autonomy.

Some countries have multilingual measures but do not formally recognise autochthonous or indigenous languages. Ireland does not have formally recognised linguistic minorities. However, Article 8 Constitution defines English and official Irish languages. In Romania, the official language

is Romanian, under Article 13 of the Constitution. Although not officially recognised, autochthonous, indigenous, or another language can be used to address courts or administration. In the administrative-territorial units in which citizens belonging to national minorities have a share of over 20% of the inhabitants, local public administration authorities and public institutions under their control, as well as decentralised public services ensures the use, in their relations with them, of the mother tongue, in accordance with the provisions of the Constitution, of this law and of the international treaties to which Romania this part. (Article 19 of the Law of the local public administration no. 215/2001). These languages are mainly Hungarian, Romani, Ukrainian, German, Russian, Turkish, Tatar, Serbian, Slovak, and Bulgarian.

In the UK, English is the *de facto* official language across England, Scotland, Wales and Northern Ireland. In Wales, Welsh and English hold equal status. This is enshrined in the *Welsh Language Act 1993*, the *Government of Wales Act 1998* and the *Welsh Language Measure 2011*. In Scotland, the *Gaelic Language Act 2005* states that Gaelic is an official language on the same footing as English. In Northern Ireland, no language currently has official status; English remains the *de facto* official language.

The US does not have any provision regulating the use of languages in the public sphere. English is the *de facto* official language, but there are no norms on protecting minority or indigenous languages.

8. Proportion administrative forms of the tax office and the population registry released/published online per year in the languages spoken of the jurisdiction examined (weighted across individuals and the indicator of recognition of the individual languages)

Country	Data
Belgium	FOD Financiën - SPF Finances- FÖD Finanzen Forms available in Dutch, French, English and German [link]
Canada	Canada Revenue Agency- Agence du revenu du Canada Forms English and French [link]
Italy	Agenzia delle Entrate Forms available in German, Slovenian, French [link]
Ireland (Republic of)	Revenue Commissioners - Na Coimisinéirí Ioncaim

	Forms in English and Irish [link]
France	Direction générale des Finances publiques Forms in French only [link]
Spain	Agencia Estatal de Administración Tributaria Forms and online submissions are available in Spanish (Castellano), Catalan, Galego, Valencian, English [link]
Romania	Agencia Națională de Administrare Fiscală The majority of documents are in Romanian Some documents are available in English as well [link]
Switzerland	Federal Revenue Agency Forms in German, French, Italian [link] Canton-level Schweizerische Steuerkonferenz - Conférence suisse des impôts - Conferenza Svizzera delle imposte Information in German, French, Italian [link]
United Kingdom	HM Revenue & Customs Available in English and Welsh [link]
United States of America	Internal Revenue Service Forms in English only [link]

Table 4 Indicator 8

Indicator 8 also refers to the actual implementation of language policies, focusing mainly on citizens, hence the traditional minorities, but with potential expansion to new minorities as well. The indicator aims at identifies the tax forms published online in different languages. The data collection is fairly simple, as this information is available and easily accessible on the revenue agencies' websites of different countries.

The results of this preliminary data collection seem to match with the ones of indicator 2: multilingual federal countries offer forms in the national minority languages, and countries with the presence of minorities in autonomous regions also provide some accommodations (Italy, though, includes only three of the twelve recognised minority languages). Interestingly all countries, except for France, also provide forms and information in English. The choice of this lingua franca is possibly motivated by the presence of expats and migrant workers as a one-size-fits-all solution to provide a certain understanding of the fiscal procedures.

6 Discussion and Recommendations

The exploratory data collection has proven its robustness and effectiveness as a measure of linguistic justice in terms of measuring the consequences of a language policy within a certain area. Overall, the empirical testing has shown discordant results. Some of the indicators proposed by Gazzola, Wickström and Fettes have scored high values on all parameters. The indicator that was more successful and easily applicable was the ones referring to the compensation domain. The nature of this domain, which does not require the satisfaction of a practical need, is probably why the conceptual model had been effectively converted into measures.

Although, some other indicators have proven ineffective instruments due to concerns about the availability of data, lack of discerning power or issues of validity. More specifically, the indicators that presented the most challenges were the toleration and accommodation dimensions and the essential services within Law and Order.

Indicator 1 loses discerning powers since the international community does not accept the existence of legislation restricting the use of one language. The principle of non-discrimination and a general understanding of the rule of law of democratic countries jeopardises the validity of the indicator. Although, despite being widely regulated at a supra-national level, the principle of non-discrimination, specifically on the grounds of language, is not uniformly recognised within domestic legal systems. A possible alternative wording in this respect would be to couch the indicator in a positive instead of a negative term. Instead of looking for the absence of legislation, the indicator could assess the presence of regulations that actively protect the right to speak one's language. For instance, the presence of the word "language" within the characteristics protected by the principle of non-discrimination, together with race, ethnicity, gender, sexual orientation and religion.

Another consideration regarding this indicator has to deal with the scope of the sample. Indeed, in their working paper, Gazzola, Wickström, and Fettes mention "requiring the absence of measures

restricting the use of any language in the private life of residents and in fully private schools” (*idem*: 14). This case-by-case analysis is not feasible on a national level, given the multiplicity of private schools, companies and other private (as in non-public) locations where individuals could potentially speak their preferred language. A case study on a specific jurisdiction based on sample data could provide a better picture (Yin, 2003). Otherwise, the analysis could shift from more subtle forms of discriminatory regulation. These “hidden bans” refer to the requirement of the use of *one* specific language in public space and official communication. For instance, the California Fair Employment and Housing Act (FEHA) prohibits an employer from adopting or enforcing a policy that limits or prohibits the use of any language in the workplace unless both of the following conditions exist: a) The language restriction is justified by a business necessity b) The employer has notified its employees of the circumstances and the time when the language restriction is required to be observed and of the consequences for violating the policy. The law was challenged in the case *Martinez v. Trademark Construction Co. Inc., Calif. Ct. App., No. D076247 (Dec. 30, 2020)*. The company was allegedly using an English-only policy. However, the Court decided that the use of English was limited to some communication and the safety training were being carried out in English and Spanish. Cases of linguistic discrimination in the private sphere like that are way more common than one might think. Targeting these sorts of problems with the indicator would require data collection: this would require an extensive analysis of case law, the company’s statute and workers’ handbooks. Hence, the parameters of availability and proximity would also fall short.

Indicator 3 on the existence of the right to language assistance in one’s first language during trials in criminal proceedings presents some shortcomings due to its wording. One solution to increase the validity of the indicator could be to slightly change the wording: while the existence of the right is, at least in theory, recognised worldwide, this might not be incorporated within the domestic legislation. In practice, this would mean investigating if the domestic legislation of a given jurisdiction includes provisions that clearly outline the right to interpretation. If taking this view, the indicator would then assess a country’s or region’s will to reiterate the importance of language during criminal trials. Indeed, countries have felt the need to clearly state the right to use one’s mother tongue during a criminal trial. For instance, Canada establishes the right to use interpreters in a court of law under Article 14 of the Canadian Charter of Rights and Freedoms. Peru’s Constitution, under Article 2.19, states that every Peruvian and foreigner living in the country has the right to use his own language before any authority by means of an interpreter. Similarly, in Romania, Law 304/2004 contains detailed provisions concerning the use of minority languages in the justice system, and Law 211/2004 stipulates that if the victim of an offence belongs to a national minority, the information on the case can be delivered in their mother tongue.

Another solution could be changing the focus from the existence of the right to the actual implementation. According to Amnesty International's view of the right to a fair trial, translators and interpreters should be easily accessible and free of charge. This view implies the presence of a registry of public professionals who can be appointed to the case directly by the tribunal itself. The indicator, in this case, would address the effective presence of a public registry of interpreters and translators for a given language, according to the demo-linguistics of a jurisdiction. Within the EU, commentary law provides the right to interpretation as a part of the principle of non-discrimination based on language.

Moreover, under Directive 2010/64/EU, all member states require creating a national public database of court-appointed interpreters for criminal matters. The implementation of the Directive has not been homogeneous, and some states have opted for smaller registries within higher regional courts. Nonetheless, the data on the number of interpreters and languages offered is available and accessible in most jurisdictions. More than the existence of the right, this analysis would portray an effective picture of the actual efforts of the judiciary towards including linguistic minorities.

Indicator 4, which investigates the language skills of the staff of refugees' reception centres and linguistic mediators, presents some significant methodological challenges in its data collection. Because most of the personnel in these structures are not part of public service but are employed by private NGOs and charities, the privacy issue presents a barrier to accessing the data required by the indicator. In order to still assess the capacity of governments to address the fluxes of refugees, the focus could be shifted from the hotspot and reception centre to the asylum hearings. Potentially, a new road to be pursued would focus on the availability of court-appointed interpreters and translators during the hearing to determine the asylum status of the refugees. This moment is very critical when communicating in one's preferred language is fundamental, especially given the sensitive topics (Campbell, 2020; Maciej Serda *et al.*, 2020).

Indicator 7, which accounts for the number of laws published in the language of a national minority, presented some conceptual issues. Indeed, when looking at the data, the trend seems to be identical to the indicators of legal recognition. Overall, indicator 7 seems redundant and misleading since it focuses on the legislative vitality more than on linguistic recognition.

Indicator 9 represents a fundamental aspect of the implementation of linguistic rights in essential services; despite being sound and robust in its conceptual model, the actual data collection for the indicator results is complicated due to mostly privacy issues. Unless the indicator distances itself from the actual implementation and focuses on the general rules and regulations on the use of minority languages at a national or regional level, the actual data collection is not feasible. The wording of the

indicator as state of the art does not seem to be valid enough to capture the complexities of language barriers in healthcare settings (Divi et al., 2007; Vacca, 2013; Briggs, 2017; Zhao et al., 2019). Hospitals do not tend to share information about the languages spoken by the staff. Due to budget cuts, the role of linguistic mediators and interpreters is often outsourced to external agencies. One feasible solution would be to rely on primary data, i.e. interviews or surveys with medical personnel and hospital staff. Although this methodology would create inconsistencies within the system of indicators, generating structural biases within the measures.

In conclusion, some of these measures are robust enough to be applied immediately, and the preliminary data collection has shown interesting findings. Some other present comparability issues can be easily overcome with minor changes in the wording. Others, unfortunately, would need additional work both in the critical understanding of the latent variable to be analysed and the conceptual model overall. These shortcomings tend to influence the availability and proximity, as well as the validity, of the indicators themselves. Overall, though, the indicators presented by Gazzola, Wickström and Fettes represent an incredibly useful attempt at the difficult task of measuring linguistic justice. As they state in their working paper, this should be the starting point of a conversation, a proposition to nudge theorists and policymakers towards appropriate solutions to problems of linguistic justice. Further research in this very important field is warmly welcomed.

7 Appendix

Country	Demography							Official language(s) ¹³
	Total population ¹⁴	Recognised national historical minorities ³	Languages spoken by minority population	Recognised indigenous people ¹⁵	Languages spoken by indigenous people	Migrant population (third country nationals and international protection) ¹⁶	Countries of origin of the migrant population	
Belgium	11.56 million	No	Romani	NA		Around 570.000	Europe (France, Netherlands, Italy), Asian countries (Syria, Afghanistan), African countries	Dutch, French, and German
Canada ¹⁷	38.01 million	Yes	French	Yes	70 recognised	7.7 million	China, Philippines, Arabic countries,	English, French

¹³ Data from countries' constitutions and regional statutes.

¹⁴ Data from World Bank 2020 Census.

¹⁵ Data from the World Directory of Minorities and Indigenous People at the Minority Rights Group International (minorityrights.org)

¹⁶ Data from Eurostat (EMN Annual Report 2021 on Migration) and RefWorld

¹⁷ Data from Canada's Census Profile, 2016 Census. Available at: <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=PR&Code1=01&Geo2=PR&Code2=01&Data=Count&SearchText=canada&SearchType=Begin&SearchPR=01&B1=Language&TABID=1>

		French-speaking Canadians 7 million		(1,673,785)	Aboriginal languages		Latin America, Eastern Europe	
Italy	59.55 million	Yes Around 3 million	French, Provençal, Franco- Provençal, German, Ladin, Friulian, Slovene, Sardinian, Catalan, Albanian, Greek and Croatian ¹⁸	NA		3.8 million	Roma, China, Morocco, Romani, Ukraine, Philippines, India	Italian (national) French, Friulian, German, Ladin, Sardinian, Slovenian (regional)
Ireland (Republic of)	5.00 million	No		NA		Around 310.000	Romania (and Roma people), Brazil, Spain, South Asia, China	Irish and English
France	67.39 million	No	Alsatian, Basque, Breton, Corsican,	NA		3.9 million	Roma, North Africa	French

¹⁸ Minority languages recognised and protected under Law 482/1999

		Around 3 million	Dutch, Flemish, German, Occitan					
Spain	47.35 million	Yes 8 million	Aragonese, Aranese, Asturian, Basque, Catalan, Leonese, Valencian ¹⁹	NA		3.7 million	Roma, Ecuador, Morocco, Romania, Colombia, South East Asia	Spanish (national) Aranese, Basque, Catalan, Valencian, (regional)
Switzerland	8.64 million	Yes 44,000	Romansh	NA		2.1 million	Germany, France, Italy, Portugal, Montenegro, Bosnia-Herzegovina, Turkey	French, German, Italian, Romansh
Romania	19.29 million	Yes 2 million Around 2 million	Hungarian, Romani, Ukrainian, German, Greek, Russian, Turkish, Tatar, Serbian, Slovak,	NA		85.000	European countries (Serbia, Croata, Poland, Ukraine)	Romanian (national) Romani (administrative language in 79 communes)

¹⁹ Moreno Fernández and Otero Roth “Demografía de la lengua española”. Available at: <https://web.archive.org/web/20100923081035/http://eprints.ucm.es/8936/1/DT03-06.pdf>

			Bulgarian, Croatian					
United Kingdom	67.22 million	Yes Wales: 892,200 Scottish Gaelic: 57,000 [Ulster Scot: around 100,000] Irish: 104,943	Welsh, Scottish Gaelic, Irish Gaelic, Ulster Scot	NA		8.2 million	Asian countries (India, Pakistan, Bangladesh), African countries, Europeans	English (national) Welsh (recognised as minority language)
United States	329.5 million	No Hispanic: 50.5 million Black/African American: 42 million Asian American 17.3 million		Yes (No linguistic rights granted)	5.2 million Native American 1.2 Native Hawai'ians	13.9 million green card holders 11,840 refugees asylum seekers ²⁰	Latin America (Guatemala, Mexico, Honduras, El Salvador), Asia (India, Burma) Arabic countries (Egypt, Lebanon, Jordan, Morocco, Palestine)	English (de facto official language)

²⁰ Data from the Office of Immigration, Homeland Security. Report on Asylum Seekers and Refugees available at: https://www.dhs.gov/sites/default/files/2022-03/22_0308_plcy_refugees_and_asylees_fy2020_1.pdf

T2 Absence of legislation or measures forbidding the written public use of any language by businesses provided that a translation in the local dominant language is available

E.g.: Languages on the foodstuff labels

Country	Languages that must be used on labels
Belgium*	<p>“at least” French, Dutch and German</p> <p>The Belgian law of July 12, 2022, published on September 22:</p> <p>“must at least appear in the language or languages of the linguistic region where the products are placed on the market”</p>
Canada	<p>Mandatory information: English and French</p> <p>Non-mandatory information: English, (not compulsory) French.</p> <p>Languages other than English and French may appear on a label, on condition that the compulsory information is shown in the two official languages</p> <p><i>Law 206, Safe Food for Canadians Regulations (SFCR);</i> <i>B.01.012(2), Food and Drug Regulations (FDR)</i></p> <p>Quebec: French. Language other than French may also be used, provided that no inscription in the other language is given greater prominence to those written in French.</p> <p><i>Charter of the French Language, Bill 96</i></p>
Italy*	<p>Obligatory in Italian</p> <p>Multilingual labels are allowed</p> <p><i>DECRETO LEGISLATIVO 15 December 2017, n. 231</i></p> <p>Bilingual labels are not allowed in autonomous regions (bilingualism refers only to the public administration)</p>
Ireland (Republic of)*	<p>English</p> <p>Language other than English, including Irish, are allowed</p> <p><i>FSAI Guidance Note No. 29- The Use of Food Marketing Terms</i></p>
France*	<p>French</p> <p>Multilingual labels are acceptable with limitations</p> <p><i>Toubon Law</i></p> <p><i>Code de la consommation- Titre Ier : INFORMATION DES CONSOMMATEURS</i></p>
Spain*	<p>Spanish</p> <p><i>Real Decreto 930/1992</i></p>

	Catalan in Catalonia <i>Article 128-1, Chapter 8 of Law 22/2010 of July 20 of Codi de Cosum de Catalunya</i>
Romania*	Romanian
Switzerland*	As from 1st Mai 2020, the labelling must be in at least one official language of the place where the substance or preparation is supplied to private or professional users.
United Kingdom	English Other languages may be used on food labels but only in addition to English language (bilingual English Welsh not compulsory)
United States of America	FDA regulations [link] provide that “All labeling shall be in English with the exception of products distributed solely within Puerto Rico or a US territory where the <i>predominant language is other than English</i> ”

*In compliance with article 175 of the EU Decree N. 1169/2011

C5 Aggregate indicator of recognition of languages traditional minorities. Potential implementation of explicit legal or administrative rights such as to receive official information and to address and receive answers from authorities in one’s first language

Country	Data
Belgium	<p>- Article 4. Belgium comprises four linguistic regions: the Dutch-speaking region, the Frenchspeaking region, the bilingual region of Brussels-Capital and the German-speaking region.</p> <p>- Article 189. The text of the Constitution is established in the French, Dutch and German languages.</p> <p>Not officially recognised autochthonous or indigenous or other language (not immigrant language)</p>
Canada	<p>The <i>Official Languages Act</i>[28] is the law regulating bilingualism in the federal public service</p> <p>Canadian Charter of Rights and Freedoms</p>

	<p>-Section 16 states that English and French are the official languages of the country, with equal status</p> <p>- Section 17-23 regulates the use of the languages in the public services</p>
Italy	<p>Law 482</p> <p>Autonomy Statute Aosta Valley</p> <p>Autonomy Statute Alto Adige/South Tyrol</p> <p>Autonomy Statute Friuli-Venezia Giulia</p>
Ireland (Republic of)	Article 8 Constitution: English and Irish official languages, Irish national language
France	NA
Spain	<p>Basque, Catalan, Galician, Valencian</p> <p>The 1982 Language Standardization Law in País Vasco and 1986 Ley Foral del Euskera in Navarra</p> <p>1979 Statute of Autonomy Generalitat de Catalunya, 1983 the Language Standardization Act</p> <p>Galician Autonomy Statute of 1981. Language Standardization Act was passed in 1983</p> <p>Valencia's 1982 Statute of Autonomy, Valencian and Castilian are the official languages of the Valencia Autonomous Community.</p>
Romania	<p>In Romania, the official language is Romanian. Constitution of Romania. Article 13.</p> <p>Hungarian, Romani, Ukrainian, German, Russian, Turkish, Tatar, Serbian, Slovak, Bulgarian</p> <p>Not officially recognised autochthonous or indigenous or other language that can be used to address courts or administration</p> <p>Law 500/2004 concerning the use of Romanian in public places, relationships and institutions could perhaps be considered as such, although its scope is limited to the translation/adaptation into Romanian of any text of public interest expressed in a foreign language. The violation of this law does not attract any sanction.</p> <p>In the administrative-territorial units in which citizens belonging to national minorities have a share of over 20% of the inhabitants, local public administration authorities, public institutions under their</p>

	control, as well as decentralised public services ensures the use, in their relations with them, of the mother tongue, in accordance with the provisions of the Constitution, of this law and of the international treaties to which Romania this part. (Art. 19 of the Law of the local public administration no. 215/2001)
Switzerland	German, French, Italian, and Romansh are all official languages. “Members of Switzerland's linguistic minorities are recognised as national minorities, i.e. Italian, Romansh and French speakers at national level, French speakers in the canton of Bern, and German speakers in the cantons of Fribourg and Valais” Article 109 of the 1848 Constitution, ‘The three main spoken languages in Switzerland, German, French and Italian, are the national languages of the Confederation’
United Kingdom	English is the de facto official language across England, Scotland, Wales and Northern Ireland. In Wales, Welsh and English hold equal status. This is enshrined in the Welsh Language Act 1993, the Government of Wales Act 1998 and the Welsh Language (Wales) Measure 2011. In Scotland, the Gaelic Language Act 2005 states that Gaelic is an official language on the same footing as English. In Northern Ireland, no language has official status; English remains the de facto official language. The 2010 EU Directive on the right to interpretation and translation in criminal proceedings enshrines the right to interpreting and translation in legal proceedings in UK legal contexts.
United States of America	NA

8. Proportion administrative forms of the tax office and the population registry released/published online per year in the languages spoken of the jurisdiction examined (weighted across individuals and the indicator of recognition of the individual languages)

Country	Data
Belgium	FOD Financiën - SPF Finances- FÖD Finanzen Forms available in Dutch, French, English and German [link]
Canada	Canada Revenue Agency- Agence du revenu du Canada

	Forms English and French [link]
Italy	Agenzia delle Entrate Forms available in German, Slovenian, French [link]
Ireland (Republic of)	Revenue Commissioners - Na Coimisinéirí Ioncaim Forms in English and Irish [link]
France	Direction générale des Finances publiques Forms in French only [link]
Spain	Agencia Estatal de Administración Tributaria Forms and online submission available in Spanish (Castellano) Catalan, Galego, Valention, English [link]
Romania	Agencia Națională de Administrare FiscalăMostly Romanian Some documents are available in English as well [link]
Switzerland	Federal Revenue Agency Forms in German, French, Italian [link] Canton-level Schweizerische Steuerkonferenz - Conférence suisse des impôts - Conferenza Svizzera delle imposte Information in German, French, Italian [link]
United Kingdom	HM Revenue & Customs Available in English and Welsh [link]
United States of America	Internal Revenue Service Forms in English only [link]

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