



The multi-faceted benefits of language-in-education policies in Catalonia

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Language is a vehicle of communication and of socio-economic interactions. There are many contexts where linguistic gaps put communication and interactions at risk, calling for policy interventions. These contexts include multilingual societies and the assimilation of migrants in destination countries. Interestingly, the benefits of language policies are not limited to situations where linguistic gaps may jeopardize communication, but exist also in multilingual contexts where communication is guaranteed by a dominant language shared throughout society. This is the lesson that comes from the Spanish region of Catalonia. Catalonia is an asymmetric bilingual society where a local language (Catalan) and a global language (Spanish) co-exist, and where the latter is mastered by all citizens irrespective of their regional origins. The language policies adopted in Catalonia provide a valuable opportunity for assessing the socio-economic effects of promoting bilingualism.

Language-in-education policies can exert profound impacts on socio-economic outcomes in multilingual societies.

Historical and institutional background

Catalan has been spoken in Catalonia since the Middle Ages, but was progressively dismissed with the Spanish domination of the eighteenth century and eventually banned during Franco's dictatorship (1939–1975), when Spanish became the only legal language. Both Catalan and Spanish are romance languages, but Catalan is closer to English compared with Spanish in a linguistic distance sense. The return of democracy in the late 1970s provided the political framework for a reintroduction of Catalan, also as a means of promoting the political autonomy of the region and its internal social cohesion.



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Fostering proficiency in Catalan among residents became an important target for the new regional government because, after the internal migration flows of the 1950s and 1960s, especially in the more industrialized areas of the region, a substantial share of the population at that time had non-Catalan origins (i.e. first and second-generation migrants) and limited or null knowledge about the local language. Catalan became a compulsory subject in schools immediately after the end of dictatorship, but it was only in 1983 that a broader reform of the educational system towards bilingualism was put in place.

The Language Normalization Act (LNA) of 1983 established Catalan as a medium of instruction in primary and compulsory secondary schools alongside Spanish, making the education system effectively bilingual. Under the new system, the two official languages were taught as subjects in a similar number of hours. Catalan had to be used as language of instruction in at least one area of study from grade 3 to 5, and in two areas from grade 6, while Spanish had to be used as language of instruction in at least one area throughout the course of studies. The 1983 reform also introduced language immersion programmes in primary and pre-primary education. These were targeted to schools whose students predominantly came from Spanish-speaking families, which tended to be settled in neighborhoods where Catalan had very little presence. Schools in immersion programmes used Catalan as the only language of instruction during the first years of education and followed a specific methodology to stimulate second language acquisition.

The language policy as a (quasi) natural experiment

The availability of policy-induced changes in incentives or constraints is advantageous for social science research as it represents a good approximation to the idea of an exogenous shock, akin to treatment administrations in controlled experiments. Using policy shocks in combination with observational data offers the possibility of identifying behavioral responses. The Catalan language-in-education reform is no exception. Two features of the



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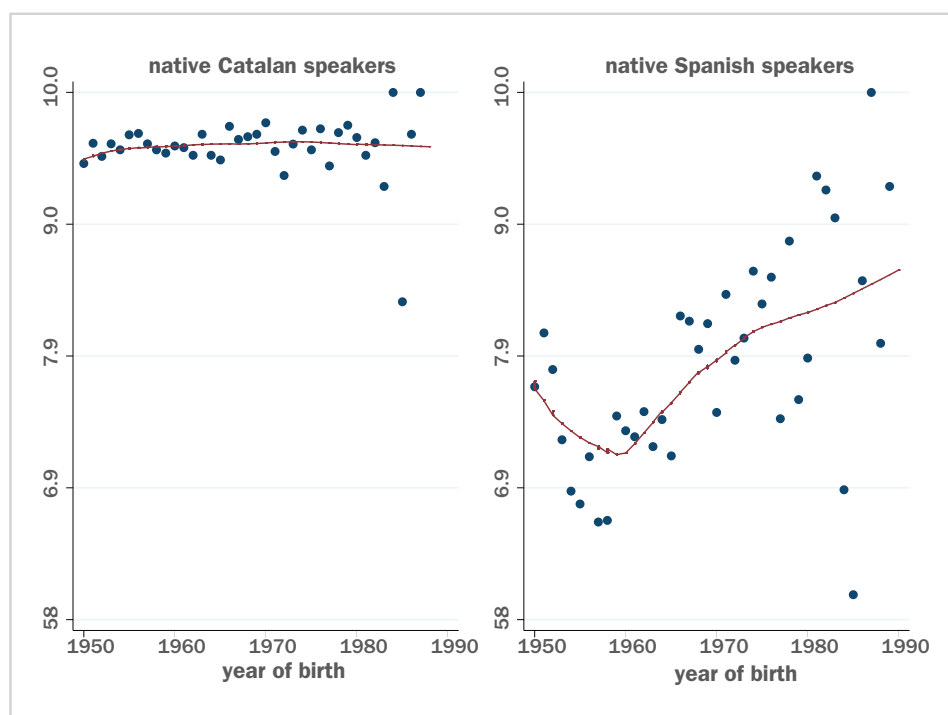
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reform make it particularly attractive in this respect. First, there is a clear distinction between a treatment and a control group. Because oral proficiency in both Catalan and Spanish was already very high among Catalan originals (native Catalan speakers), the only social group effectively receiving the bilingual treatment is represented by Spanish originals. Second, the reform was sharply implemented from the subsequent school year across all compulsory and lower secondary schooling levels, meaning that the actual amount of treatment received depends on the year of birth. Someone who had just started going to school in 1983 were entirely educated under the bilingual system, whereas someone who was about to finish school in that same year was only marginally exposed to bilingualism. Leveraging on native language and year of birth (two variables outside individual control) it is possible to re-create an experimental setting to study the effects of the Catalan language-in-education reform

on relevant socio-economic outcomes. These points are made clearer by the figure below, which portrays oral proficiency in Catalan by native language and year of birth. The data are taken from the Survey of Language Use of the Catalan Population, which is produced by the Catalan Statistical Institute (IDESCAT), with unique information on sociolinguistic characteristics, such as native language, self-identification language, proficiency, parents', partners' and children's language. The left panel of the graph shows that oral proficiency in Catalan is generally high among individuals with Catalan origins, and does not vary much with the year of birth. The right panel (Spanish native speakers) tells a different story. In general, proficiency in Catalan is lower for this group. Proficiency starts increasing for the birth cohorts of the 1970s, that is the cohorts that were in school when the reform was implemented. More recent cohorts of Spanish native speakers, who were educated entirely through

Figure 1:
Oral skills in Catalan by year of birth and native language

Source : Ramon Caminal, Lorenzo Cappellari, Antonio Di Paolo: *Language-in-education, language skills and the intergenerational transmission of language, in a bilingual society, Labour Economics, in Press.*



the bilingual system, have a level of proficiency that is comparable to that of Catalan originals. It is through this double contrast of native language and year of birth (a difference-in-difference) that the socio-economic effects of bilingualism in Catalan schools can be identified.

The socio-economic effects of the Catalan language-in-education policy

Recent research has exploited the quasi-experimental variation induced by the LNA to estimate its effects on relevant socio-economic outcomes. One such outcome are individual wages, which are widely used in the economics literature for measuring the effects of education. The key concept in this literature is the “return to education”, the percentage wage change due to an additional year of schooling. The existence of such returns is a cornerstone of the theory of human capital, whereby education or other forms of knowledge accumulation, such as training, increase individual productivity and, ultimately, earnings. A study that compared returns to education between the cohorts treated and not treated by bilingualism at school after the LNA found that returns to education increased by a fifth (changing from 6.5% to 7.9%) among the cohorts exposed to bilingual education. Limiting the estimations to the returns of compulsory education (rather than the whole education attained) confirmed the findings, ruling out the possibility that the baseline result was reflecting a changing selection of more able students into education due to bilingualism. The study also found that bilingualism did not affect employment probabilities or hours of work, exerting purely a wage effect, suggesting that bilingual education fosters the accumulation of human capital, which is then rewarded in terms of wages. This is in line with

results from cognitive psychology on the positive effects of bilingualism on cognitive skills. Another result of the study was that the benefits of the reform were larger among individuals with Spanish origins –which is consistent with expectations given the graph of the previous section— and among those with disadvantaged background, irrespective of origins. The latter finding speaks in favour of a generalized increase in the quality of educational supply brought about by bilingualism.

It is not obvious whether or not the linguistic reform of 1983 also affected the patterns of social interactions. This question was addressed by a study that examined the effect of the new language skills on the formation of marriages. It was found that the enhanced bilingualism of native Spanish speakers induced by the language-in-education reform improved their chances of mating with a Catalan-speaking partner. In particular, a native Spanish speaker born before 1970, and hence not affected by the reform, had a 33% chance of being matched with a native Catalan speaker. Instead, a native Spanish speaker born after 1983, and hence fully affected by the reform, had a 40% probability of being matched with a Catalan speaker, which shows that the reform has significantly decreased the level of endogamy. This result clearly suggests that languages are not merely communication devices. Individuals are emotionally attached to their native language or the language they later adopt as their own. Thus, like in other types of social relations, the formation of marriages is affected not only by the ability to communicate but also by the partners’ linguistic preferences. The potential conflict of interest over the language used in the relation is weakened when both partners are bilingual. More specifically, if only one of the partners is bilingual then the marriage is feasible when the

preferences of the bilingual partner are not too strong. In this case, the preferences of the monolingual partner do not matter since the only option is to use the language of the monolingual partner. Instead, if both partners are bilingual, then it is sufficient that one of the partners has relatively weak preferences since they can now use either language. Hence, the higher the fraction of bilingual individuals in the Spanish speech community, the lower the level of endogamy.

Promoting social integration among individuals with heterogeneous regional and linguistic origins was among the main objectives of the LNA and more in general of post-dictatorship policies in Catalonia. A way to assess whether social cohesion was fostered in an enduring way is to consider not only its effects among the cohorts of students affected by the reform, but also any potential spillover to the offspring of those individuals. Indeed, there is evidence that the effects of the reform were passed through from parents to children. This is the key finding of a study investigating the effects of linguistic skills on the choice of speaking Catalan to children made by parents who were native Spanish speakers exposed to the LNA. In making this choice, parents are constrained by their skills in Catalan and trade off cultural identity against the benefits of linguistic integration of their children. In this context, the language-in-education reform increases the ability of speaking Catalan for the cohorts of Spanish-speaking parents that were exposed to it, with an impact on intergenerational language choices. As suggested by the graph, the reform indeed had a positive effect on the language skills of Spanish originals. The estimated effect was a 15% increase of language skills (duly measured in the IDESCAT survey) due to the reform. The reform also had an impact on the probability that native Spanish parents use

Catalan with their children, of about 20 percentage points. Exploiting the policy shock to identify the effect of language skills on intergenerational language choices, this study concluded that the increase of skill brought about by the reform increased the probability of speaking Catalan to children by about 13 percentage points. These intergenerational spillovers support the view that the reform had a long-run effect in promoting social cohesion, on top of preserving the vitality of the local language.

The lesson from Catalonia is that language policies are beneficial for social cohesion even when communication is not at stake.

What do we learn?

There are clear positive effects on socio-economic integration stemming from the introduction of bilingualism at school after the Catalan LNA reform of 1983. The question now becomes to what extent these effects can be generalized to other contexts, for example to the Luxembourgish one. This is a matter of external validity and economists are always very cautious in extrapolating conclusions out from the context in which they were obtained. There are several institutional and cultural specificities suggesting that caution may be a good idea in the case of the LNA. Still, we may try to

draw some parallels between Catalonia and Luxembourg. In particular, while for the Luxembourgish full trilingualism is not an issue, knowledge of all three languages spoken in Luxembourg is more problematic for immigrants, who may be able to use French and or German in day to day activities, but whose proficiency in Letzeburgesch will presumably be low. In a sense, these immigrants share the condition of Spanish originals in Catalonia who did not know the local language. The lesson that we can draw from the Catalan LNA is that promoting full trilingualism among these groups may benefit them both economically and socially.

Based on

Ramon Caminal, Antonio Di Paolo: Your Language or Mine? The Non communicative Benefits of Language Skills, *Economic Inquiry*, Vol. 57, Issue 1, pp. 726-750, 2019

Lorenzo Cappellari, Antonio Di Paolo: Bilingual schooling and earnings: Evidence from a language-in-education reform, *Economics of Education Review*, Volume 64, June 2018, Pages 90-101

Ramon Caminal, Lorenzo Cappellari, Antonio Di Paolo: Language-in-education, language skills and the intergenerational transmission of language, in a bilingual society, *Labour Economics*, in Press