

## Till localism do us part: cultural identity and the costs of separation

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# **Till localism do us part: cultural identity and the costs of separation.**

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**Abstract.** Members of a regional community may derive disutility from interacting with individuals of other regional groups. Such a “preference for similar people”, also known as homophily, favors segregation across communities and possibly leads to political secession. In this paper, we balance the advantage of separation (which favors cultural identity in a homogeneous community) against its economic costs. Indeed, both the prominence of domestic markets when barriers to foreign exchanges are high, and the costs needed to administer a newly-born nation can make secession very costly. We show that, when it occurs a substantial increase in openness to international exchanges –as has actually happened under the common European market- the costs of separation will fall and the bias for sameness will be likely to prevail, leading to secession.

**Keywords:** Localism, homophily, secession.

**JEL classification:** D74, H77

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## 1. Introduction

As emphasized by Golman et al. (2016), the bitterest conflicts most often arise among communities that have a lot in common but still retain cultural differences. Such differences shape the specific identity of each group and ground feelings of “homophily”, the “preference for similar people”. Following this perspective, we propose a framework which explicitly builds on homophily in social interactions, after Currarini et al. (2009), Dalmazzo et al. (2014) and Dalmazzo et al (2018). In particular, we postulate that members of heterogeneous groups derive utility from interacting with members of the same group, while derive disutility when interacting with members of the other group. As an example, which is not exhaustive, think of languages. Catalonians, due to their cultural identity, may get pleasure from speaking Catalan language and dislike to speak Castilian. In this respect, the taste for “sameness” is a strong force favoring segregation across communities. More in general, the ostentation of specific cultural traits (besides language, or accent) by the members of a group may imply costs when interacting with members of other groups. To this regard, our approach has similarities with the “parochialist” story put forward by Bowles and Gintis (2004), or with the idea of “cultural intolerance” proposed by Bilancini et al. (2018).

The cases of Catalonia and Scotland are quite suggestive for our purposes.<sup>1</sup> Even if it shares many similarities with its neighbors in the Iberian peninsula, Catalonia has several historical and cultural specificities. For instance, the tradition of Catalanian independence from the rest of Spain dates back to 801, when the Frankish empire occupied the northern part of the region to build a defensive barrier against Muslim invasions (the *Marca Hispanica*). After 1137, the Catalan counties joined the Crown of Aragon, but the Principality of Catalonia was allowed to form a sophisticated institutional and political system which could legislate unilaterally and collect taxes. Such liberties progressively faded from 1519 on, when Charles V was elected as Holy Roman Emperor. During the war of Spanish Succession at the beginning of the 18<sup>th</sup> century, Catalonia sided against the Bourbon King, Felipe V, but it was defeated on the 11 September 1714 (nowadays, the Catalan national holiday). To give Spain a more centralistic administration, Felipe V suppressed Catalonia’s institutions and rights. Coming to a more recent past, the industrialization process in the 19<sup>th</sup> century went together with the revival of nationalism and cultural renaissance, with an expanding use of Catalan language. Such thrusts, though, were brutally repressed under Franco’s dictatorship (1939-1975), until Spain eventually regained democracy. Interestingly, Clots-Figueras and Marsella

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<sup>1</sup> Just considering western Europe, there are several other examples of localism, such as Northern Ireland, the Walloon provinces in Belgium, and Northern Italy.

(2013) show how bilingual education in Catalonia, after the 1983 reform, has oriented voting behavior towards parties with a Catalanist platform and stimulated separatist attitudes.

Another historical example of a region which expresses claims for independence is Scotland. The Kingdom of Scotland, as an independent state, dated back to the Early Middle Ages and ceased to exist in 1707. Later on, under the Kingdom of Great Britain, Scotland has been granted much autonomy in terms of legal, religious and educational institutions which contributed to the preservation of a Scottish culture and national identity. Notwithstanding such concessions, local secessionist instances brought to a Scottish independence referendum in 2014. Although the contest was quite close, the majority (55,3%) voted against the separation from the United Kingdom. Still, Brexit could eventually lead to a new referendum.

The power of the cultural factors driving homophily and the quest for independence, however, may be counterbalanced by economic considerations. In particular, economic factors such as market size, fixed costs in administration, justice and defense, remain crucial elements for determining the size of a nation, as emphasized by Alesina et al. (2000). The fixed costs for running a state can be quite large, especially when they are to be borne by a smaller population: see Alesina and Spolaore (1997, 2003). Moreover, the international trade regime has strong implications for the importance of the domestic market, relative to foreign markets. For example, Tirado et al. (2013) note that, over the second half of the 19<sup>th</sup> century, Barcelona was the Spain's main industrial cluster, benefiting from a position which favored access to trade with Europe. This advantage was greatly reduced when Spain turned to protectionism, which artificially increased the relative importance of the domestic market. After Franco's dictatorship, the process of European market integration eventually led Spain into the EEC in 1986. As a consequence, the dependence of the Catalan trade on the internal Spanish market declined dramatically. This circumstance greatly reduced the costs of separation from Spain. Similarly, the relative importance of the Commonwealth for Scottish trade declined, after the United Kingdom joined the EEC in 1973. Our framework postulates that identitarian attitudes are bad for the consumption and production opportunities of minority members whenever they are exposed to economic exchange with members of the majority. Indeed, the latter may end up shunning the former. This idea is consistent with the findings in Suesse (2018) from the collapse of Soviet union, and Schulze and Wolf (2009) from the Habsburg Empire, which emphasize the relevance of ethno-linguistic factors for trade networks. Thus, the "marginal cost" of local cultural attitudes becomes higher when the weight of the domestic market is large, relative to international trade.

To summarize, in the framework we propose we balance the advantage of separation - which favors cultural identity in a homogeneous community - against the economic costs of: (i) a larger incidence of fixed costs required by progressive devolution and, (ii) the necessity of facing a smaller market size, when barriers to foreign exchanges are relevant. When such barriers are removed –as it has actually happened under the common European market, which boosted foreign trade for regions like Catalonia and Scotland - the costs of separation fall, and the bias for sameness is more likely to prevail and encourage secessionist claims.

Our approach is related to the literature on the size of nations, such as Bolton and Roland (1997) and Alesina and Spolaore (1997, 2003), among others. This literature, however, mainly emphasizes fiscal aspects, such as taxation and redistribution across regions. Fiscal redistribution obviously plays a very important role. For instance, Catalonia, by producing a relatively large income, is a net donor towards the rest of Spain. Here, however, we prefer to emphasize cultural differences as the main driver of heterogeneity, similarly to Dalmazzo et al. (2018).<sup>2</sup> From a modeling perspective, this boils down to replacing the standard measures of spatial distance across individuals commonly used (see in Alesina and Spolaore, 1997, Alesina et al., 2004, Demset et al. 2011) with an explicit representation of the frequency of interactions among individuals who belong to different communities. In other words, while Alesina and co-authors model the cost of heterogeneity as a measure of (cultural) distance among individuals, here the costs of heterogeneity arise from the interactions of two socio-cultural groups which have *different size*, the majority and the minority. The impact of such interactions on individual welfare depends on two main factors. First, the smaller the size of the minority, the larger the costs of interaction with members of the majority. Second, such costs also depend on the degree of segregation between minority and majority members, as in Currarini et al. (2009). In particular, we will exploit a continuous measure of segregation which encompasses all the degrees of devolution, starting from full integration to complete separation between the majority and the minority.

Section 2.1 presents the model and exposes the main results, emphasizing the contrast between the gains of greater cultural homogeneity versus the economic costs of administering smaller jurisdictions and maintaining trade relations with the majority. The numerical examples offered in Section 2.2 show how different degrees of segregation between communities affect the cultural attitudes of minority members, as well as their welfare under different conditions (such as trade openness, or size of fixed costs of administration). Section 3 concludes.

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<sup>2</sup> Our approach bears also some similarity to Alesina et al. (2004), which emphasizes the role of (racial) heterogeneity in the shaping of local jurisdictions.

## 2. A simple theoretical framework

In this section, we illustrate the features and the properties of our theoretical framework (Sect. 2.1) and, then, we provide some numerical examples which give an illustration of the results we obtain (Sect. 2.2).

### 2.1 *The model.*

In the country we consider there are two communities, community  $C$ , denoted by the subscript  $c$ , and community non- $C$ , denoted by the subscript  $-c$ . Community  $C$  (the minority) is smaller than non- $C$  (the majority), and has size equal to  $1 - q$ , with  $\frac{1}{2} \leq q < 1$ . Each member of community  $C$  takes an action –which has “identitarian” features- bringing direct benefits at some costs. The benefits from an active exhibition of own cultural traits – such as ethnicity, language or religion and, in general, commonly shared beliefs: see Golman et al. (2016) - may be both psychological and material.<sup>3</sup> Cultural consonance reinforces the sentiment of being part of a community and, at the same time, it may bring advantages from “particularistic” economic interactions, as suggested by Guiso et al. (2006, 2012). However, the ostentation of own cultural traits has costs which, again, depend both on cultural and economic factors. On the one side, the interactions with members of the other community may discourage an individual to pursue actions that emphasize her communitarian identity. For example, the use of local language, or of local accent, may be explicitly discouraged to favor the language spoken by the majority. At the extreme, members of the majority can take actions aimed at repressing expressions of the minority’s identity. Such a “cultural clash” is modeled as a “strategic substitutability” between own and other group’s actions.<sup>4</sup> Moreover, there are economic costs that can be related to the size of the market outside own community. Indeed, identitarian attitudes may reduce access to markets which are operated by members of the majority. As suggested by Bowles and Gintis (2004), while “parochialism” favors trade with members of the same group, it supports exclusion from trade with individuals outside the group.<sup>5</sup> Finally, separation increases the burden of fixed costs associated with the management of an independent jurisdiction. In conclusion, a progressive separation across groups will lower attrition among heterogeneous individuals but – as emphasized in Alesina et al. (2000) - it may well reduce participation in a larger market and, further, exacerbate the burden of administrative costs.

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<sup>3</sup> For example, a Catholic may choose whether to be an active member of a Catholic association, an Afro-American may opt for “acting Black”: see also Akerlof and Kranton (2000, 2005).

<sup>4</sup> In order to simplify the framework, here we do not consider the strategic complementarity arising from the pleasure of interacting with individuals of the same community, as in Dalmazzo et al. (2014). This does not alter qualitatively the main implications of the model.

<sup>5</sup> See also Greif (1994) on cultural belief diversity.

We postulate that each member of community  $C$  chooses an action  $x_c$  to maximize the following objective function:

$$U_c = \alpha \cdot x_c - \gamma \cdot [1 - (1 - q)^\sigma] \cdot x_c \cdot \bar{x}_{-c} - \frac{k_c}{2} \cdot (x_c)^2 - \frac{\Phi}{(1 - q)^{1-\sigma}}. \quad (1)$$

The parameter  $\sigma \in [0,1]$  has a central role here, since it can be interpreted as a measure of political integration across communities. For  $\sigma = 1$  the two communities are fully integrated while, for  $\sigma = 0$ , there is complete segregation (see Currarini et al., 2009).

Expression (1) has the following interpretation. The “identitarian” action  $x_c$  gives a direct benefit  $\alpha > 0$  but implies cultural costs ( $\gamma > 0$ ) which increase both in the size of the other community,  $q$ , and in the average intensity of the actions in the other community,  $\bar{x}_{-c}$ . Moreover, identitarian actions are likely to have adverse effects on the economic opportunities of minority members, depending on the relevance of economic exchange with majority members. For instance, strong identitarian attitudes by an individual of the minority can induce members of the majority to exclude her from favorable opportunities of consumption or production.<sup>6</sup> For this reason, we assume that action  $x_c$  has a quadratic cost which depends on  $k_c \equiv k + \frac{q}{\varepsilon}$ , with  $\varepsilon \geq 1$  and  $k \geq 2\gamma$ . The ratio  $\frac{q}{\varepsilon}$  emphasizes the relevance of exchanges with the majority, of size  $q$ , relative to those with the rest of the world, as measured by  $\varepsilon$ . Similarly to Alesina et al. (2000), higher openness to international trade reduces the relative dependence on the national market, thus reducing  $k_c$ . Thus, identitarian actions have a marginal cost that depends on market openness. Indeed, consistently with evidence in Suesse (2018), we assume that ostentation of local cultural attitudes bears no consequences on trade in *international* markets. In the Appendix, we show how equation (1) can be derived from a utility function defined both in the identitarian action,  $x_c$ , and individual consumption.

Finally, a higher degree of independence (lower  $\sigma$ , here) will increase the incidence of fixed costs, denoted as  $\Phi > 0$ , that are associated with the administration of the region.<sup>7</sup>

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<sup>6</sup> In this perspective, there is an implicit trade-off between the exhibition of cultural attitudes and the ability to reach higher levels of consumption and income. As mentioned, such a trade-off is more severe when the volume of economic exchange with the other community is greater.

<sup>7</sup> On the role of administration costs for the size of jurisdictions, see also Andini et al. (2017).

Similarly, members of the majority (the non- $C$  community) will choose  $x_{-c}$  so to maximize:

$$U_{-c} = \alpha \cdot x_{-c} - \gamma \cdot [1 - q^\sigma] \cdot x_{-c} \cdot \bar{x}_c - \frac{k_{-c}}{2} \cdot (x_{-c})^2 - \frac{\Phi}{q^{1-\sigma}}, \quad (2)$$

where  $k_{-c} \equiv k + \frac{1-q}{\varepsilon} < k_c$ . For the typical member of the majority, the burden of cultural costs tends to be reduced by the circumstance that interactions with minority members are fewer, since  $1 - q \leq \frac{1}{2}$ . Also, the quadratic cost component is lower, since economic exchange with minority members from the  $C$ -community, relative to the trade with the rest of the world, is smaller. Moreover, even in case of separation, the majority is able to spread the fixed costs of administration over a relatively larger population.

From (1), one obtains that the Nash optimal choice for a minority member under within-group symmetric behavior (that is,  $x_c = \bar{x}_c$ ):

$$x_c^* = \frac{\alpha - \gamma \cdot [1 - (1 - q)^\sigma] \cdot \bar{x}_{-c}}{k_c}, \quad (3)$$

while the Nash optimal action for a majority member, under  $x_{-c} = \bar{x}_{-c}$ , is given by:

$$x_{-c}^* = \frac{\alpha - \gamma \cdot [1 - q^\sigma] \cdot \bar{x}_c}{k_{-c}}. \quad (4)$$

By combining (3) and (4), the equilibrium actions of minority and majority members are, respectively, equal to:

$$x_c^{**} = \frac{\alpha \cdot [k_{-c} - \gamma \cdot (1 - (1 - q)^\sigma)]}{k_c \cdot k_{-c} - \gamma^2 \cdot [1 - q^\sigma] \cdot [1 - (1 - q)^\sigma]}, \quad (5)$$



and

$$x_{-c}^{**} = \frac{\alpha \cdot [k_c - \gamma \cdot (1 - q^\sigma)]}{k_c \cdot k_{-c} - \gamma^2 \cdot [1 - q^\sigma] \cdot [1 - (1 - q)^\sigma]} \cdot \quad (6)$$

Before discussing the implications for the welfare of a typical minority member, we first consider the impact of segregation versus integration on the action  $x_c^{**}$ . By differentiating (5) with respect to  $\sigma$ , the measure of integration across communities, we obtain that  $\frac{dx_c^{**}}{d\sigma} < 0$  holds true whenever it holds that:

$$\frac{k_{-c}}{\gamma} \cdot \frac{(1 - q)^\sigma}{1 - (1 - q)^\sigma} \cdot \frac{k_c - (1 - q^\sigma) \cdot \gamma}{k_{-c} - q^\sigma \cdot \gamma} \cdot \frac{\ln(1 - q)}{\ln q} > 1. \quad (7)$$

Inequality (7) generally holds true, as we argue in what follows.<sup>8</sup> Progressive separation (lower  $\sigma$ ) will reduce the impact of cultural costs and, thus, encourage minority members to increase identitarian actions. For example, in the case of Catalonia, steps toward political separation are most likely to impose the use of Catalan over Castilian.

Next, we look at the impact of openness on  $x_c^{**}$ . For instance, trade openness reduces the dependence of minority members on the domestic market, as emphasized in Alesina et al. (2000), thus reducing the economic costs of identitarian actions. Differentiating (5) with respect to our openness measure  $\varepsilon$ , it holds that  $\frac{dx_c^{**}}{d\varepsilon} > 0$  whenever the following condition is satisfied:

$$\frac{q}{1 - q} \cdot \frac{k_{-c}}{\gamma \cdot [1 - (1 - q)^\sigma]} \cdot \frac{k_{-c} - \gamma \cdot [1 - (1 - q)^\sigma]}{k_c - \gamma \cdot (1 - q^\sigma)} > 1. \quad (8)$$

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<sup>8</sup> As in the numerical examples developed in Section 2.2 below, we calculate (7) for (the most unfavorable) case when  $\sigma = 1$  and  $\varepsilon \rightarrow \infty$ , and set  $k = 1$  and  $\gamma = 0.4$ , consistently with our assumption. Taking the case of Catalonia, since it accounts for 16% of Spain population (see Eurostat, 2018), we set  $q = 0.84$ . For such values, (7) is largely satisfied.

Inequality (8) generally holds true. For  $\sigma = 1$ ,  $k = 1$ ,  $\gamma = 0.4$ , and  $q = 0.84$ , (8) is satisfied for any  $\varepsilon \geq 1$ . Thus, a reduction in the dependence on the domestic market - due to an increase in foreign exchanges stimulated by economic integration - stimulates minority members to choose stronger identitarian actions. As a result, an increase in market openness can prompt localism and lead, eventually, to claims for political independence.

These implications can be summarized as follows:

*Remark 1. In general: (i) increasing segregation across communities and, (ii) a lower dependence on the national market, relative to the international market, will encourage minority members to increase actions emphasizing their own cultural identity.*

We can now discuss the impact of integration/segregation on the utility of the typical minority member. This step is obviously crucial to assess the incentives to secede in different scenarios. The indirect utility function is

$$V_c = \alpha \cdot x_c^{**} - \gamma \cdot [1 - (1 - q)^\sigma] \cdot x_c^{**} \cdot x_{-c}^{**} - \frac{k_c}{2} \cdot (x_c^{**})^2 - \frac{\Phi}{(1 - q)^{1-\sigma}}, \quad (9)$$

where  $(x_c^{**}, x_{-c}^{**})$  are defined, respectively, by expressions (5) and (6). By differentiating (9) with respect to  $\sigma$  and using the Envelope Theorem, one obtains:

$$\frac{dV_c}{d\sigma} = H_1 + H_2 + H_3, \quad (10)$$

where the terms  $(H_1, H_2, H_3)$ , defined below, summarize the effects of increasing integration on minority members' utility.

Consider first  $H_1 \equiv \gamma \cdot x_c^{**} \cdot (1 - q)^\sigma \cdot \ln(1 - q) < 0$ . This term captures the role played by “homophily”. Indeed, minority members suffer from more integration, since it produces closer

interactions with members of the majority. On the other hand, the term  $H_2 \equiv -\gamma \cdot x_c^{**} \cdot [1 - (1 - q)^\sigma] \cdot \frac{dx_c^{**}}{d\sigma}$  is positive since, in general, it holds<sup>9</sup> that  $\frac{dx_c^{**}}{d\sigma} < 0$ . Indeed, more integration also reduces the action of majority members and, thus, it lowers the pressure exerted on the minority. Finally, the term  $H_3 \equiv -\frac{\Phi \cdot \ln(1-q)}{(1-q)^{1-\sigma}}$  is positive. Integration has also beneficial effects, since it reduces the burden of fixed costs,  $\Phi$ , on minority members.

In conclusion, the sign of expression (10) strikes the balance between the net gains from separation vs. integration. The main conclusion can be summarized as follows:

*Remark 2. If the “cultural costs” of integration dominate the economies of scale which arise from running larger communities, the minority will go for separation.*

In the next section, we will present some numerical examples which help emphasizing the main features of our model. In such examples, we will also show that the trade-off illustrated by Remark 2 may crucially depend on the degree of trade openness.

## 2.2. Some examples

In what follows, we represent individual actions and utility as a function of  $\sigma \in [0,1]$ , the degree of integration between the majority and the minority. In the numerical examples presented, we take  $\alpha = 1$  and, consistently with the assumptions we made, we set  $k = 1$  and  $\gamma = 0.4$ . Using Catalonia as an example, from demographic statistics in Eurostat (2018), we set  $1 - q = 0.16$ . The tables that follow are constructed for the two polar cases of openness to foreign trade, that is, low openness and high openness. In particular, low openness holds for  $\varepsilon = 1$ , so that the marginal cost  $k_c \equiv k + \frac{q}{\varepsilon}$  reduces to  $k + q = 1.84$ . By contrast, high openness is represented by  $\varepsilon \rightarrow \infty$ , so that  $k_c = k = 1$ . This will enable us to illustrate the relation between the gains from secession and international market integration.

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<sup>9</sup> Notice that  $\frac{dx_c^{**}}{d\sigma} < 0$  holds whenever  $\frac{k_c}{\gamma} \cdot \frac{q^\sigma}{(1-q^\sigma)(1-q)^\sigma} \cdot \frac{k_c - (1-(1-q)^\sigma) \cdot \gamma}{k_c - (1-q^\sigma) \cdot \gamma} \cdot \frac{\ln q}{\ln(1-q)} > 1$  is satisfied. This inequality holds under the parametrization used in our numerical example. Moreover, the numerical example suggests that  $\frac{dx_c^{**}}{d\sigma}$  is quite small in absolute value.

We start by looking at minority members' optimal action.

**Table 1.** Minority member's action for different levels of integration.

	$x_c$ (low openness)	$x_c$ (high openness)
$\sigma = 0$	0.54	1
$\sigma = 0.5$	0.43	0.76
$\sigma = 1$	0.4	0.68

Table 1, first column, shows how the intensity of the action of a minority member changes with integration, when trade openness is relatively low. Greater integration (higher  $\sigma$ ) reduces the level of identitarian actions. This can be due to cultural stigma, or even outright repression, exerted by the majority. Thus, as suggested by Remark 1, increasing degrees of devolution (from federalism to outright independence) will encourage minorities to reinforce their cultural attitudes. As can be noticed from the second column of Table 1, the intensity of identitarian actions from minority members grows much larger when openness is high. Openness reduces the dependence on the domestic market and, thus, it reduces the economic cost of localism. Indeed, the adhesion of Spain and United Kingdom to the European Economic Community witnessed the resurgence of nationalistic sentiments in Catalonia and Scotland.

Similar conclusions hold when considering how integration affects actions of majority members. As can be immediately noticed from the first column in Table 2 (holding for the case of low trade openness), and from the second column of the same table (illustrating the case of high trade openness), the individual action of a typical majority member is still decreasing in the degree of integration between communities. However, the impact of integration is pretty modest.

**Table 2.** Majority member's action for different levels of integration.

	$x_c$ (low openness)	$x_c$ (high openness)
$\sigma = 0$	0.87	1
$\sigma = 0.5$	0.857	0.975
$\sigma = 1$	0.85	0.955

The intuition behind this result, driven by homophily, is quite simple. Interactions with a minority which represents only the 16% of domestic population is going to produce limited nuisance to majority members. As a consequence, the degree of political integration has a mild impact on the optimal decisions of the majority.<sup>10</sup>

We next analyze the incentive to secede or integrate. To this purpose, we concentrate on the level of welfare of a typical *minority* member as a function both of the degree of integration,  $\sigma$ , and of the degree of trade openness,  $\varepsilon$ . A larger value of  $\varepsilon$  implies more openness. In what follows, we will focus on different levels of fixed costs, denoted by  $\Phi$ .

We start by considering the case when the fixed costs of administration are relatively *small* (here,  $\Phi = 0.01$ ). Utility is plotted as a function of integration,  $\sigma$ , and openness,  $\varepsilon$ . Figure 1 illustrates the level of utility  $V_c$  of a typical minority member in this case. As can be immediately observed, when the burden of fixed costs is small, utility will decrease with integration, no matter the degree of openness to international trade. The intuition is straightforward: the increasing “cultural” costs from integration prevail over the benefits from sharing fixed costs with a larger population. As a consequence, the minority’s best option will be secession ( $\sigma = 0$ ). This case illustrates the conclusion drawn in Remark 2. The example also suggests that, when fixed costs are sufficiently small, separation will be preferred. Moreover, the welfare gains from separation are larger the larger openness (i.e., for larger values of  $\varepsilon$ ).

[Figure 1 here]

The opposite case, holding when the burden of fixed costs is relatively *large* (that is,  $\Phi = 0.1$ ), is represented in Figure 2. Here, the increasing cultural cost from integration is dominated by the ability to share fixed administrative costs with a larger population at the national level, regardless of the degree of openness to international exchanges. Thus, minority members will prefer full integration ( $\sigma = 1$ ) and, at the same time, they will be ready to moderate their identitarian attitudes, as shown in Table 1.

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<sup>10</sup> This conclusion confirms that the term  $H_2$  in expression (10) is negative and small in size.

[Figure 2 here]

Since openness does not appear to be decisive for extreme values of fixed costs, we next consider an intermediate case where such costs are neither too small nor too large (that is,  $\Phi = 0.03$ ). Figure 3 suggests that, when trade openness is low (say,  $\varepsilon = 1$ ), minority members will be willing to accept full integration ( $\sigma = 1$ ), since it is welfare-enhancing. In other words, the relevance of domestic exchanges, relative to international exchanges, is likely to make separation quite costly. Indeed, minority members with pronounced identitarian motivations may find it more difficult to access domestic markets dominated by the majority, as suggested by the literature emphasizing the role of cultural identity on trading networks. On the contrary, when increasing trade openness reduces the relative importance of the domestic market by easing access to foreign markets, minority members may opt for secession ( $\sigma = 0$ ). This case is illustrated for  $\varepsilon = 5$ , where minority members' utility is *decreasing* in integration. As a consequence, openness makes secession desirable and, at the same time, it gives a strong boost to identitarian attitudes: see Table 1.

[Figure 3 here]

The post-WWII European history offers an ideal background for the mechanisms emphasized by our model. Increasing economic and political union across member countries have had two major effects. On the one hand, the common European market has made national markets less relevant for regions like Catalonia<sup>11</sup>, Scotland and Northern Italy. On the other hand, decades of peaceful coexistence among EU member states have reduced the relevance of national armed forces, a major

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<sup>11</sup> As remarked by a referee, other Spanish regions, such as the Basque Country, Valencia, the Balearic Islands and Galizia, have specific identitarian characters like Catalonia, but have not developed pro-independence attitudes as strong as the Catalan ones. In our perspective, this can be due to regional differences in the ability to exploit the opportunities from trade openness. For instance, by exploiting calculations in Minondo (2010), between 1994 and 2005, Catalan provinces were able to upgrade their quality-adjusted export index by +1,12% , a figure which is only inferior to the one of the Valencia provinces (+1,43). The provinces of the Balearic Islands and of Galizia scored, respectively, -0.44% and -0.01%, thus loosing ground in terms of export quality. The Basque Country, including Navarra, scored +0.9%. In short, the evidence from Minondo (2010) suggests that regions that shared strong localism had a varied ability to grab the gains from openness. The case of the Basque Country is reconsidered later.

source of fixed costs for national states.<sup>12</sup> Consistently with the intuition of Alesina et al. (2000) and the predictions of our homophily-based model, these factors have favored pushes toward local secessions, together with a greater activism in identitarian manifestations.

A last remark is in order. Our model generates “corner” outcomes. In other words, minority members will prefer either full integration ( $\sigma = 1$ ), or full separation ( $\sigma = 0$ ). How to justify the actual existence of intermediate forms of devolution such as federalism (i.e.,  $0 < \sigma < 1$ ), then? In the discussion developed so far, we have concentrated on the *incentives* to separate or stay together. However, even leaving apart extreme cases such as the former Republic of Yugoslavia, the actual implementation of a secession may imply additional costs of conflict with the majority, say  $K \geq 0$ , to be borne by the members of the minority. This is, for instance, the case when the majority resorts to the use of force to subdue secessionist claims. Rewrite the indirect utility (9) as  $V_c(\sigma)$ , and suppose that full separation is preferred, so that  $V_c(0) > V_c(1)$  holds true. In the presence of a conflict cost  $K$ , if it holds that  $V_c(0) - K \geq V_c(1)$ , minority members will be willing to compromise on the degree of devolution  $0 < \sigma^* < 1$  which (uniquely) solves the equation  $V_c(\sigma^*) = V_c(0) - K$ . Obviously, the larger the cost a conflict can inflict on minority members, the higher the equilibrium degree of integration.<sup>13,14</sup>

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<sup>12</sup> Spain military expenditure as a ratio of GNP has fallen from 1.84% in 1975 to 1.22% in 2016. For France, military expenditure over GDP was 3.6% in 1975, falling to 2.26% in 2016. The figures for Germany are 2.4% in 1990 and 1.18% in 2016 (Source: World Bank, World Development Indicators). Besides increasing European integration, such figures obviously reflect also the collapse of the Warsaw Pact.

<sup>13</sup> At the same time, the case of small fixed administration costs depicted in Figure 1—which exacerbates the gains from secession under trade openness—suggests that, given the value of  $K$ , a higher degree of trade openness will allow the minority to obtain a greater degree of devolution (that is, a lower level of  $\sigma^*$ ): indeed, higher openness boosts the value  $V_c(0)$ .

<sup>14</sup> An interesting case is the one of the greater region of the Basque Country, which includes both Spanish and French provinces. In that case, the independence of a unified Basque nation would have to deal with the potential costs imposed by both Spain and France. Also, much of the perceived gains from a regional secession depend on the expected reaction of the EU. On the interplay between independence parties and the EU see, for example, Boylan and Turkina (2019).

### 3. Concluding remarks

The desire to defend and promote their own identity for the members of a community leads most often to homophiliac attitudes which, at the local level, may lead to territorial split-ups. The nexus between cultural clash and open conflict has been largely emphasized by Golman et al. (2016). Although the preference for similar people pushes for segregation, political secession is likely to entail sizable economic costs. Such costs have to do both with the burden of administering a new independent state, and with the ability to access the (formerly) domestic market. As argued, the process of European integration has greatly favored foreign trade and, at the same time, has reduced the importance of costly national armies as a deterrent against neighbors. Consistently with the suggestions from Alesina et al. (2000), such circumstances have largely reduced the economic costs of a split-up. Such a conclusion, however, also depends on other players which are not explicitly considered in our model. Consider the case of Catalonia. If Catalonia secedes from the rest of Spain, how will the European Union react? Different scenarios have very different implications. If the newly-born Catalan state were (almost immediately) admitted to the EU, the economic costs of a secession would actually be low. But if the EU were not ready to admit Catalonia, trade barriers to European markets could prove to be very costly, as the current debate on Brexit is suggesting. On the other hand, if the EU were willing to admit a newly-born Scottish nation as a member, this could stimulate claims for independence in a post-Brexit UK.

A final remark is in order. The model we propose deliberately neglects an important externality. Integration between communities does not only produce costs due to homophily, although such costs are neatly perceived by community members. Indeed, integration among heterogeneous people can help producing new ideas, as suggested -among others- by Ottaviano and Peri (2006). Then, why not to consider explicitly this aspect – cross-fertilization of ideas - in our model? (Formally, this would be straightforward...). Our answer is simple: individuals are quite likely to overlook such a positive externality when considering whether to separate or not.



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## Appendix.

### Derivation of equation (1).

Consider the following utility function, which includes the net direct benefits from identitarian action,  $x_c$ , defined on the support  $x_c \in [0, x_c^{sup}]$ , and individual consumption, denoted by  $\mathcal{C} \geq 0$ :

$$\mathcal{U}_c = \alpha \cdot x_c - \gamma \cdot [1 - (1 - q)^\sigma] \cdot x_c \cdot \bar{x}_{-c} + \mathcal{C} - \frac{\Phi}{(1 - q)^{1-\sigma}}. \quad (\text{A1})$$

As in equation (1), the first two terms on the right-hand-side have to do with the pleasure of expressing own identity and the costs from interacting with another culture (the majority's culture). The third term is individual consumption, which is constrained by individual income, denoted by  $Y$ .

We consider two cases.

The first case, which has some use only to illustrate the properties of the framework, postulates that the identitarian action  $x_c$  has *no impact* on income  $Y$  of the typical member of the minority. Under such circumstances, the optimal choice problem is trivial, implying that  $\mathcal{C}^* = Y$  ( $Y$  is exogenously given, here), and  $x_c^* = x_c^{sup}$  whenever the condition  $\alpha - \gamma \cdot [1 - (1 - q)^\sigma] \cdot \bar{x}_{-c} > 0$  holds true.<sup>15</sup>

The second case is the one of interest in the present context. We suppose that the identitarian action  $x_c$  interferes with the production possibilities of the individual. In particular, we postulate that the income of the individual,  $Y$  (which is also equal to consumption  $\mathcal{C}$ ) is given by:

$$Y = \hat{Y} - \frac{1}{2} \left( k + \frac{q}{\varepsilon} \right) \cdot x_c^2 = \mathcal{C}, \quad (\text{A2})$$

where  $\hat{Y}$  is a constant denoting the highest level of income (and consumption) the individual would attain if she abstained from identitarian attitudes (that is, if  $x_c = 0$  was chosen). Expression (A2) underscores the detrimental impact of identitarian attitudes on exchange with majority members, an issue that is widely discussed in the main text, and also emphasizes that such costs depend on the relative relevance of trading with majority members. As in the text, we define  $k_c \equiv \left( k + \frac{q}{\varepsilon} \right)$ .

Using (A2) to substitute for  $\mathcal{C}$  in equation (A1) above, we obtain the following expression:

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<sup>15</sup> On the other hand, when  $\alpha - \gamma \cdot [1 - (1 - q)^\sigma] \cdot \bar{x}_{-c} \leq 0$  holds true, the optimal choice is  $x_c^* = 0$ .

$$\mathcal{U}_c = \alpha \cdot x_c - \gamma \cdot [1 - (1 - q)^\sigma] \cdot x_c \cdot \bar{x}_{-c} + \hat{Y} - \frac{k_c}{2} \cdot x_c^2 - \frac{\Phi}{(1 - q)^{1-\sigma}}. \quad (\text{A3})$$

Notice that, apart from the constant  $\hat{Y}$  (which is irrelevant to the optimum problem), utility (A3) coincides with equation (1) in the text. Thus, the analysis developed in the main text will still go through, even when one explicitly allows for consumption in the utility function.

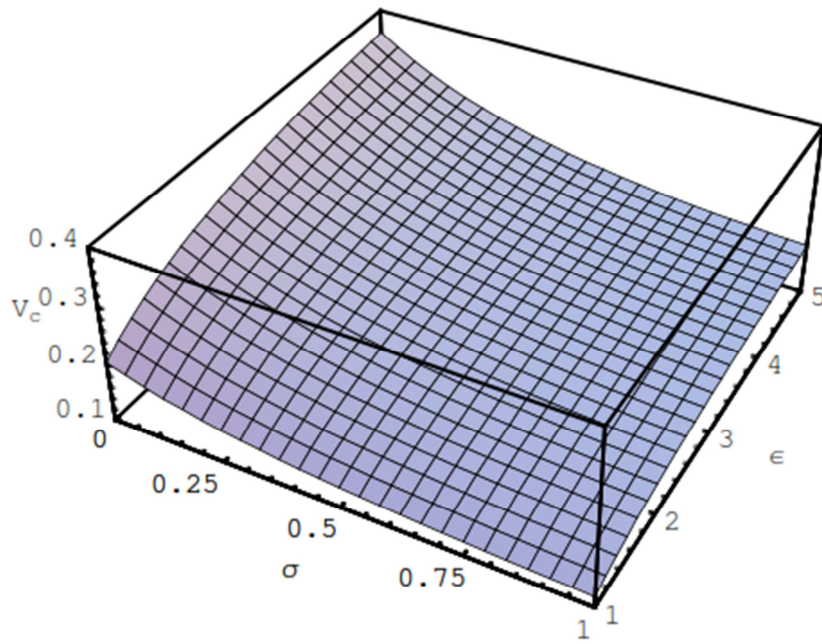


Figure 1. Small fixed costs

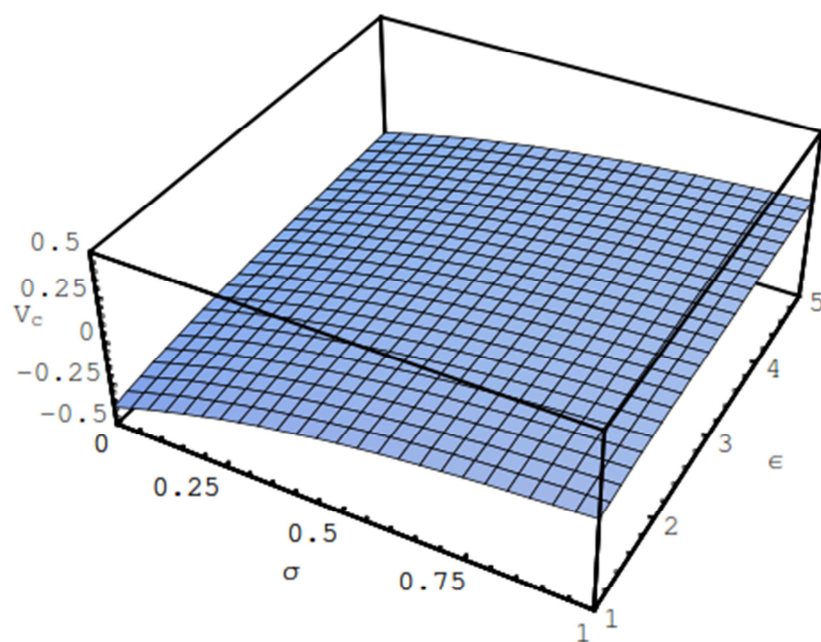


Figure 2. Large fixed costs

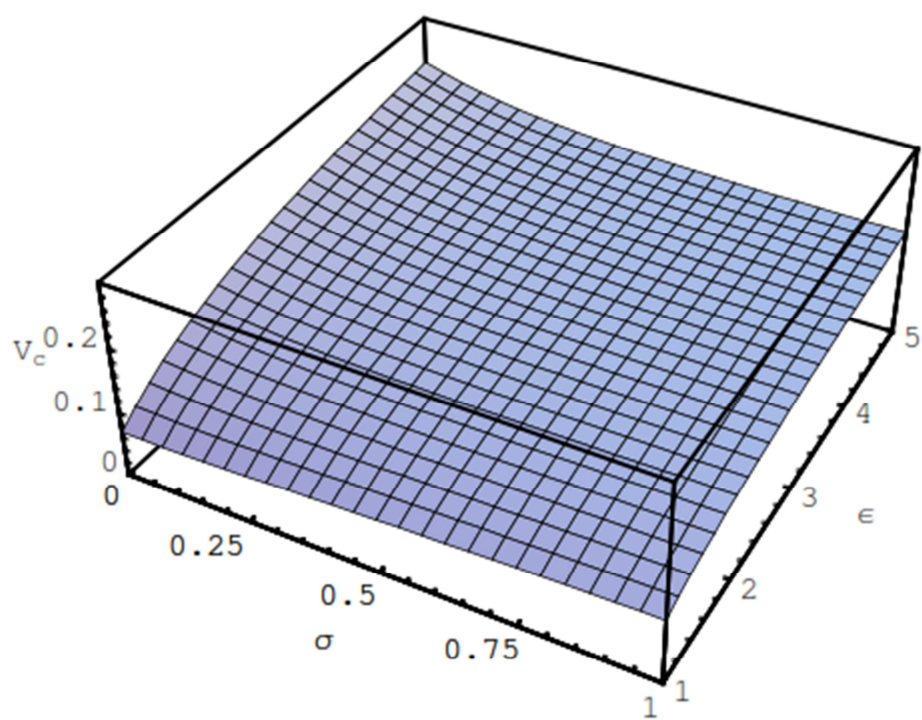


Figure 3. Moderate fixed costs