# The Economic Approach to Political Borders*

Enrico Spolaore

Tufts University and NBER

December 2022

***Abstract***

*This paper overviews theoretical and empirical studies of political borders from an economic perspective. It reviews theories of the number and size of nations focused on the trade-off between economies of scale in public-good provision and heterogeneity of preferences over public policies as well as on the factors affecting this trade-off, such as democratization, international openness, and conflict. It also reviews theories of political integration and disintegration focused on economic inequality, redistribution policies, and the geographical distribution of resources. Finally, the paper discusses recent empirical studies that shed light on the relations among heterogeneity, conflict, and borders. This line of research is part of a growing literature on the interplay between cultural variables and economic and political outcomes.*

*This paper has been prepared as a chapter in *Border Studies: A Multidisciplinary Approach*, edited by Thomas M. Wilson, Edward Elgar Publishing. I am grateful to the editor and an anonymous reviewer for their comments. The paper is dedicated to the memory of Alberto Alesina and benefited from conversations with participants at a conference in Alberto's honor organized by Eliana La Ferrara and Guido Tabellini and held at Bocconi University in May 2022.

*This paper is dedicated to the memory of Alberto Alesina (1957-2020)*

## 1. Introduction

Economists' interest in political borders is both very old and relatively new. The study of the economic effects of national borders is about as old as economics itself. The whole discipline of international economics is about trade and other economic exchanges across political boundaries. However, for a long time standard economic analyses took borders themselves as given - or, in economics jargon, as exogenous. Only in more recent decades economists have joined historians, political scientists and other scholars in the explicit study of political borders as human-made (endogenous) institutions, shaped by decisions and interactions among diverse individuals and groups over time and space. Nowadays, economists are asking much broader questions about borders, involving their determination and dynamics.

Earlier contributions on the formation and breakup of sovereign states include Friedman (1977), Buchanan and Faith (1987), Findlay (1996), Alesina and Spolaore (1997, 2003), Bolton and Roland (1997), Ellingsen (1998), Wittman (2000), Alesina, Spolaore and Wacziarg (2000, 2005), Milanović (2001), Goyal and Staal (2003), Le Breton and Weber (2003), Spolaore (2004, 2008), Haimanko, Le Breton and Weber (2005), and Spolaore and Wacziarg (2005). Examples of more recent research in this area are Michalopoulos and Papaioannou (2016), Fernández-Villaverde, Koyama, Lin and Sng (2020), Cervellati, Lazzaroni, Prarolo and Vanin (2019), Gancia, Ponzetto and Ventura (2022), Esteban, Flamand, Morelli and Rohner (2022), and Castañeda Dower, Markevich and Zhuravskaya (2022). Several of the above contributions will be covered in the rest of this paper, as part of a broader discussion of concepts and themes that characterize the economic approach to political borders (for previous discussions of this literature see, for instance, Alesina and Spolaore, 2015, and Spolaore, 2016). The paper will also discuss related work on civil and international conflict.

Questions addressed in the economic literature on borders are: Why do sovereign states and political unions form and break up? What are the costs and benefits of secessions? Do these costs and benefits depend on openness to international trade and other aspects of globalization? How is political disintegration related to voting and democratization? How do federalism and decentralization affect the incentives to secede or integrate? What determines conflict within and across borders, and how are borders in turn shaped by wars and military alliances?

These are difficult and multi-faceted questions, and an economic approach to them is not a substitute for historical, anthropological, political, and sociological investigations, often focused on specific case studies and events. Rather, an economic study of borders should be viewed as complementary to other methods. Political economists, by using theoretical concepts and empirical tools that are relatively general, can provide insights which enrich the debate on the complex issues related to the formation and breakup of states and other political units. At the same time, as economists have been looking more closely at phenomena such as the spread of separatist movements and the causes of civil and international conflicts, they have become more attentive to factors traditionally considered outside the scope of economics and have begun to integrate variables and concepts from other disciplines (anthropology, linguistics, sociology, and so on) in their own work.

A major force behind this new interest in borders by economists has been the emergence of modern political economy as a dynamic, flexible, and remarkably successful field, at the center of mainstream economics, embracing its more rigorous and advanced mathematical and econometric methods, and yet open to multidisciplinary approaches, including an increasing attention to factors and mechanisms related to culture, history, and social interactions. A key role in this transformation was played by Alberto Alesina, one of the creators of contemporary political economy and a pioneer in the study of endogenous borders from a politico-economic perspective, as well as a seminal contributor to numerous other related areas, such as the political economy of ethnic diversity and the interactions between culture and institutions. Thanks to Alberto's curiosity and creativity, the study of political institutions – including countries and unions – and their interplay with culture and history have become part of a broader research agenda by a large number of scholars, as reflected in the activities of the Political Economy Group that he founded at the National Bureau of Economic Research, whose periodical meetings have regularly included a workshop on Culture and Institutions, co-organized by Alberto Bisin and Paolo Giuliano. This chapter is dedicated to Alberto Alesina's memory and benefited from inputs and conversations with participants at a conference in his honor held at Bocconi University on May 24-25, 2022.

The rest of this paper is organized in three sections. Section 2 overviews analytical contributions on borders. This section covers theories focusing on the trade-off between benefits and costs of political size, stemming from economies of scale in public good provision versus heterogeneity of preferences over public policies. The trade-off is affected by political and economic factors, such as democratization, international openness, cultural diversity, and conflict. The section also includes a brief discussion of other theories of political integration and disintegration where a central role is played by economic inequality, redistribution policies, and the geographical distribution of productive land and resources.

Section 3 illustrates through examples how researchers have brought economic theories of borders and conflict to the data, studying a range of diverse but related topics: from the long-term effects of the determination of borders by colonial powers during the 19th and early 20th century to the consequences of federalism and decentralization on border stability; from the relation between cultural heterogeneity and conflict within and across borders to the role and dynamics of cultural variables. Section 4 provides a few concluding remarks.

## 2. Economic Theories of Political Borders

What are the determinants of political borders? What are the causes and consequences of having fewer, larger states versus more numerous, smaller states? Earlier contributions by economists interested in these traditionally "non-economic" questions included David Friedman (1977), who provided an informal discussion of the shape and size of nations from the perspective of rent-maximizing governments ("Leviathans"), and Buchanan and Faith (1987), who presented a model where a legal right to secession constrains the potentially exploitative behavior of the ruling political coalition. However, it was only in the 1990s and 2000s that economists began to provide more systematic analyses of the dynamics of national borders from a contemporary politico-economic perspective.

This research was partly motivated by the breakups of the Soviet Union, Czechoslovakia, and Yugoslavia as well as by the creation of new independent states in Africa and Asia in the post-colonial period (most recently, Eritrea, Timor-Leste, and South Sudan). The economic literature on borders and conflict has continued to grow in recent decades, along with the spread of separatist movements and civil conflicts all over the world. An additional spur to this research has been the ongoing debate about institutional integration in Europe, and the controversial exit of Britain from the European Union in 2020, following a UK-wide referendum in June 2016. The more recent challenges to international cooperation during the Covid-19 pandemic and the geopolitical crisis following Russia's invasion of Ukraine have provided further motivation for research on the determinants and consequences of conflict over political borders.

The trade-off between benefits from a larger size and political costs associated with heterogeneous preferences over public goods and policies is at the center of the contribution by Alesina and Spolaore (1997), who provided a model of the determination of the number and size of nations under different political and economic regimes. Benefits from a larger size include economies of scale in the provision of public goods, such as a common legal and judicial system, foreign policy and defense, public health, infrastructure for transportation and communications, a monetary system, and so on. Providing public goods comes with economies of scale because they are "nonrival" in consumption: each citizen can benefit from them without reducing the benefits for other citizens. Even when the total costs of publicly provided services increase with the size of the population, their average cost is decreasing in size because of fixed costs that can be spread over a larger population. Thus, public goods are generally cheaper per person when more taxpayers pay for them (Alesina and Wacziarg, 1998). Larger political unions can also internalize cross-regional externalities, as emphasized in numerous studies on political integration, federalism, and international unions (e.g., Ellingsen, 1998; Oates, 1999; Alesina, Angeloni and Etro, 2005).

If economies of scale were the only factor in the formation of countries, larger national jurisdictions would always be more efficient than smaller ones. However, economic theories of borders have stressed that a larger size can also entail substantial costs. These costs are not merely "economic" - say, related to income or productivity -, but can also stem from preferences and values associated with dimensions such as language, culture, religion, and ethnicity. As already mentioned, a distinctive feature of modern political economy, pioneered by scholars like Alberto Alesina, has been the realization that economic outcomes and political institutions cannot be fully understood without an explicit inclusion of social preferences and attitudes that are often rooted in culture and history. Those factors must be explicitly included in the analysis, as they affect people's views and choices about national identity and political borders. On the other hand, an approach focused on the interplay between economic and non-economic factors has the benefit of avoiding the opposite error of placing the entire emphasis on cultural and ethnic forces, while discarding more material and economic interests, which can also be significant and consequential.

When considering the relation between economic and non-economic aspects of people's choices and preferences about borders, two points should be kept in mind. First, it seems safe to assume that most people do not have "lexicographic preferences" – that is, they do not prefer any amount of one good (say, autonomy or independence) to any amount of another good (say, higher consumption), or vice versa. Rather, individuals are often willing to trade off different objectives at the margin, as they consider the costs and benefits of different political arrangements. Second, people's views and attitudes about issues such as cultural and ethnic identity or nationalism are not set in stone but are often the endogenous outcome of the historical interplay of political and economic factors. While deeper cultural considerations tend to affect choices and political outcomes, current social and economic forces can in turn change people's cultural values and beliefs.

A central question in the economic analysis of borders is: What are the sources of the trade-off between benefits of size and costs from larger, more heterogeneous polities? In general, cultural heterogeneity is associated with both costs and benefits from an economic and political perspective. In fact, higher heterogeneity of traits and preferences can bring about substantial *benefits* through innovation, specialization, and learning (Alesina and La Ferrara, 2005). These benefits are especially large in the production and exchange of *private* (i.e., rival) goods. For example, a society with people who have diverse tastes in private consumption and/or different preferences for when to work (say, earlier in the morning or later at night) is likely to function more efficiently and harmoniously than a society where everyone wants to consume the same identical goods and work at the same identical times. However, more diverse preferences over *public* goods are harder to reconcile because, as already mentioned, public goods are nonrival: all citizens of a political jurisdiction must share the same government, laws, and public policies, whether they like them or not. While this is a reason for economies of scale, it is also a source of potential political conflict. When borders include more heterogeneous populations with different norms, values, habits, and so on, one is more likely to observe the emergence of disagreements over public goods and policies, such as the characteristics of the legal system, the choice of official language(s), foreign and defense policy, and other major public decisions.

An important insight from the political economy of national size is that the trade-off is not constant over time and space, but it may vary depending on the internal situation of each society as well as on the international regime. Political costs from heterogeneity are lower in societies with institutions that can achieve a democratic consensus more effectively and can credibly guarantee compensations to minorities that are farther from the policies of the central government. In contrast, consensus is harder to achieve in societies with a history of internal conflicts and civil wars. In other words, societies can reduce the political costs of heterogeneity, while maximizing the benefits from diversity, by developing inclusive institutions that ensure political and economic rights and compensations to minorities who are "farther" from median preferences and policies. However, there are limits to the political feasibility and credibility of these mechanisms and transfers, as it will be briefly discussed below.

Changes in the trade-off between economies of scale and heterogeneity of preferences over public policies have played a key role in the politico-economic analysis of the determination and dynamics of borders (Alesina and Spolaore 1997, 2003). For instance, a decrease in the economic benefits from a larger domestic size - say, because of lower policy barriers to international trade (Alesina, Spolaore and Wacziarg, 2000, 2005; Hiscox, 2003; Spolaore and Wacziarg, 2005) and the creation of commercially-integrated unions (Gancia, Ponzetto, Ventura, 2020) - can bring about political disintegration (secessions), while the opposite can occur when economies of scale become more prominent – for instance, because of a higher probability of having to use defense against external threats (Riker, 1964; Alesina and Spolaore, 2005, 2006; Spolaore, 2004, 2012).

But how do changes in the factors affecting the trade-off translate into actual changes in political borders? Economic theories of borders have considered different concepts of solutions or equilibria. These concepts can be viewed along a continuum. At one extreme, we can find "optimal" or "efficient" solutions, whereby borders are derived from the maximization of some explicit social goal or welfare function - for example, the maximization of the sum of everyone's utilities, in the spirit of Bentham (1789) and Harsanyi (1955), or the maximization of the welfare of the worst-off individual or group, in the spirit of Rawls (1971). Even though these normative solutions are abstract and counterfactual (in the real world, "social planners do not exist," Alesina, 1988), they can provide useful benchmarks against which to compare more realistic outcomes. At the other extreme, there are definitions of equilibria resulting from the decisions and strategic interactions of actual political agents - governments and citizens. Within them, again, one can distinguish between more "ideal" solutions, where borders emerge, for instance, from peaceful and democratic voting, and historically more realistic mechanisms whereby borders are determined by rent-maximizing rulers (Leviathans), often recurring to the threat (or actual use) of force (for a discussion, see for instance Spolaore, 2012). This research is part of a broader literature on the economics of conflict and wars (e.g., Garfinkel and Skaperdas, 2007, 2012 and Blattman and Miguel, 2010).

Among studies of border formation in terms of the economics of conflict, a recent contribution is Fernández-Villaverde et al. (2020), who model the evolution of sovereign states as the outcomes of localized conflicts over land. In their framework, the probability of a border conflict depends on the productivity of the "cell" involved, capturing the idea that more productive regions are more tempting for neighbors to conquer. Over time, some polities (states) expand and come to rule a larger block of cells, while other polities lose control of cells or disappear. Simulations of their model shed light on why Europe ended up with multiple independent states while China has remained politically centralized. In their framework, two geographical features, topography and agricultural productivity, are independently sufficient to explain the differing dynamics of Europe and China in terms of political fragmentation and centralization.

This research is part of an expanding literature on the relations among geography, warfare, state formation, and borders. An earlier contribution on this topic is Turchin et al. (2013), arguing that the conflict between nomads from the Eurasian steppe and settled agriculturalists favored the emergence of large states by fostering investments in state capacity and defensive technologies. The growing economic literature on state capacity and military technologies includes several contributions that are relevant for understanding border formation - for instance, Gennaioli and Voth (2013) and Voigtländer and Voth (2013). Recently, Cervellati et al. (2020) explicitly model changing state capacity and the rule of law over space as the outcomes of strategic interactions between elites and develop a dynamic theory where polities of different types (medieval "domain" reigns, city states, modern territorial states) evolve over time and space. They then bring the predictions of their theory to the data, relating them to patterns in the political geography of Europe between 1000 and 1850.

A separate line of inquiry has focused on direct democratic decisions over borders. While explicit votes about borders and secessions are historically exceptional, their study has become increasingly relevant as more regions have voted over independence (for example, Scotland in 2014). Even when the determination of borders by democratic voting is not a realistic description of actual border formation, it can provide a useful benchmark to compare actual outcomes. In this respect, the study of voting equilibria is analogous to (but distinct from) the derivation of optimal solutions based on utilitarian or Rawlsian criteria.

As shown in Alesina and Spolaore (1997, 2003), when voters with political preferences that are "distant" from the central government pay taxes based on their income and not on their preferences (i.e., there are no "preference-based" compensations), voting over borders can lead to equilibria with excessive political fragmentation ("too many" countries). Therefore, an important question is whether appropriate compensations and side-payments may change voters' calculation and affect the stability of national borders. In principle, preference-based transfers could compensate regions that would otherwise secede. Then, everyone (or, at least, a large enough majority) could be better off in the unified country. Transfers as means to prevent inefficient secessions have been studied by Alesina and Spolaore (1997, 2003), Le Breton and Weber (2003), Haimanko, Le Breton and Weber (2005), and others. Historically, however, pure preference-based transfers seem to be relatively rare. Most likely, this is because these transfers can be unfeasible, excessively costly to implement, politically non credible, or incompatible with other social goals. Preference-based transfers, by definition, abstract from income differences. Thus, in some circumstances, they might require large transfers from poorer to richer regions and individuals. This could clash with goals of interpersonal equity. For example, Weese (2015), by analyzing the redrawing of Japanese municipalities, finds that, in principle, the central government could increase welfare through a counterintuitive (and possibly politically infeasible) policy implying transfers to richer municipalities, conditional on their participation in a merger.

Income-based transfers, unlike preference-based transfers, are widespread and much easier to implement, both politically and economically. However, in general, such transfers do not ensure efficient or stable borders. On the contrary, they are at least as likely to create incentives for secessions. One of the earliest studies of the relationship between redistribution and country breakup was by Bolton and Roland (1997), who provided a model where differences in income distributions across regions cause differences in preferences over public policies, and hence incentives to secede, even in the absence of other forms of heterogeneity. General discussions of the relation between transfers and border stability can be found in Alesina and Spolaore (2003, chapter 4) and Spolaore (2010).

## 3. Heterogeneity, Borders, and Conflict

Economic theories of borders have placed heterogeneity of preferences over public policies and types of government at the center of the trade-off determining the number and size of political jurisdictions, not only from an “optimal” or “efficient” perspective, but also in models of voting or in historically more realistic settings where borders are determined by the interactions of non-benevolent rulers, often under the shadow or explicit use of military power.

But how can such heterogeneity and its effects be measured? Bringing the economic analysis of political borders to the data entails several conceptual and practical challenges. An obvious issue is that borders, while changing over time and space, do not vary with the frequency and regularity of other more widely studied variables. Thus, they are not as amenable to the kind of empirical analysis that is common in other areas of economics or political science. Even more importantly, sovereign states and their borders are complex political institutions, and their determinants are generally the outcome of long chains of multiple causes and effects interacting with each other over long historical periods. Hence, their determinants are not easily tractable with the standard tools of econometrics (instrumental variables, etc.). Consequently, it has been relatively harder to assess to what extent alternative theories and approaches to political borders can apply to historical experiences.

Nevertheless, in recent years researchers have been making significant progress by employing new, creative empirical strategies and by relying on novel data from a variety of sources (historical, linguistic, anthropological, etc.). The rest of this Section will not attempt a systematic overview of the growing empirical literature on the political economy of ethnicity and culture and how it relates to the economics of borders. Instead, it will focus on a few examples of research that have shed insights on the relation between heterogeneity and borders from different angles, such as the study of "artificial" vs. "natural" borders and their connections with the study of federalism and decentralization, and the empirical analysis of the relations among ethnic identity, cultural heterogeneity, and conflict.

Alesina, Easterly and Matuszeski (2011) defined artificial states as "those in which political borders do not coincide with a division of nationalities desired by the people on the ground." They proposed two measures of the degree to which political borders may be "artificial." The first measure captures how borders split ethnic, linguistic or religious groups into two separate adjacent countries. The other measure relies on the mathematics of fractal dimensions and captures, intuitively, the overall "straightness" of land borders. The underlying idea is that straight borders are more likely to be artificial – that is, the outcome of decisions by rulers who drew the borders without considering detailed geographical and ethnic information on the ground. These authors found that, on average, countries with a high measure of "partitioned" groups have lower income per capita. They interpreted their results as consistent with the hypothesis that artificial borders increase the incentives to advance nationalist agendas at the expense of economic and political development. For instance, two African countries with borders of very different "artificiality" are Equatorial Guinea and Botswana. In Equatorial Guinea, the Fang ethnic group is partitioned with Cameroon and Gabon, and the country's mainland borders are basically straight lines. In contrast, Botswana is mostly formed by an unpartitioned ethnic group (Tswana) and has relatively "squiggly" borders. Both countries are rich in natural resources (oil and diamonds, respectively), and yet Equatorial Guinea has been an unstable and poor dictatorship for most of its post-colonial history, while Botswana has a history of relative democratic stability and economic development. The countries with the most "artificial" borders according to both measures proposed by Alesina, Easterly and Matuszeski (2011) are Chad, Ecuador, Equatorial Guinea, Eritrea, Guatemala, Jordan, Mali, Morocco, Namibia, Niger, Pakistan, Sudan (before the breakup of South Sudan), and Zimbabwe.

As documented by Alesina, Easterly, and Matuszeski (2011), African borders are especially "artificial": 80 percent of them follow latitudinal and longitudinal lines. In fact, historians have pointed out that African borders are the outcome of a process that was mainly determined by European governments in the 19$^{th}$ century, without any African representation, whereby "African concerns were, if they mattered at all, completely marginal to the basic economic, strategic, and political interests of the negotiating European powers" (Asiwaju, 1985, p. 1). As Lord Salisbury, Britain's prime minister, said in a speech in 1890: "We have been engaged in drawing lines upon maps where no white man's feet have ever tord; we have been giving away mountains and rivers and lakes to each other, only hindered by the small impediment that we never knew exactly where the mountains and rivers and lakes were" (quoted in Michalopoulos and Papaioannou, 2016, p. 1808). The high "artificiality" of African borders and the large number of portioned ethnic groups that resulted from distant European powers' decisions have motivated a systematic study of the long-term consequences of the "Scramble for Africa" by Michalopoulos and Papaioannou (2016). This contribution is an instructive instance of use of historical and anthropological data by economists studying how the formation of specific borders may affect conflict and other political and economic outcomes. By considering partitioned ethnic groups and exploiting variation across ethnic homelands, these authors could address some of the econometric issues related to the endogenous process of border formation, such as selection, reverse causality, and omitted variables. Specifically, Michalopoulos and Papaioannou found no systematic geographic, economic, and cultural differences between split and non-split ethnic homelands, consistent with an "accidental nature" of most African borders, at least with respect to ethnic partitioning. They then used information on the spatial distribution of ethnicities using anthropological data that was collected to reflect the situation on the ground at the end of the 19th century and beginning of the 20th century, before the setting of contemporary national borders. They identified partitioned groups by projecting current national borders on George P. Murdock's Ethnolinguistic Map (1959), which divided Africa into over 800 regions and was based on primary sources covering the period 1860–1940. By combining this information with georeferenced data on political violence between 1997 and 2013, they found that partitioned ethnic groups have suffered significantly longer and more devastating periods of internal political violence in more recent years, as well as more frequent military interventions from neighboring states. They also found that split groups are often targets of government-led discrimination and more likely to be involved in ethnic wars, and that individuals who identify with partitioned ethnicities are more likely to report to be poor. Overall, this evidence is consistent with substantial heterogeneity costs when political borders are "artificially" drawn by rulers who ignore the specific preferences and social arrangements of the people on the ground.

A recent study by Castañeda Dower, Markevich and Zhuravskaya (2022) provides intriguing evidence on the determination of the borders of five autonomous republics in Central Asia (Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan and Uzbekistan) in the 1920s, and the consequences of these partitions for conflict within ethnic groups and towards the central government. According to these authors, the Soviet central government in Asia behaved quite differently from previous colonial powers in Africa and other parts of the world. Far from setting borders "artificially," the Bolsheviks consciously implemented a strategy that closely followed an "ideal division": groups were aggregated in ways that minimized ethnic segregation within each newly formed republic, subject to minimum-size constraints related to economies of scale. In each newly formed republic, the largest ethnic group was then given special status as the "titular nationality." The only exception to this ideal divisions was Northeast Kazakhstan, a region inhabited by a substantial number of European immigrants (Russians, Ukrainians, and Germans), who were not given autonomy but included in Kazakhstan, under the Kazakhs as titular nationals.

Why did the Bolsheviks pursue these border policies and what were the results? Castañeda et al. (2022) attempt to answer these questions through an original empirical analysis, using a new dataset on local conflicts from Soviet secret police reports combined with historical census data. They find that the strategy of forming separate "nationality-based" autonomous republics was indeed successful from the Soviet government's perspective: not only ethnic conflict was relatively lower in these republics, but revolts against the Soviet central government were also less frequent, compared to the outcomes in Northeast Kazakhstan (which they use as their "control"). Castañeda et al. (2022) also find that the Bolsheviks' strategies of nationality-based decentralization were also successful at fostering the socioeconomic development and nation-building of the titular nationals in each newly formed republic, insofar as these groups gained in terms of population shares and higher literacy (starting from very low levels). Thus, the outcomes of the Bolshevik border policies in Central Asia appear broadly consistent with the interpretation of historians such as Terry Martin (2001), who coined the term "affirmative action empire" to characterize the Soviet approach to its minorities during the 1920s and early 1930s, before the Stalinist reversal, when centralization and Russification came back with a vengeance. However, perhaps the formation of new republics might also be explained in more traditional terms, as an instance of "divide and rule" (Conquest,1987; Pipes, 1997), especially aimed at preventing the Muslim subjects of the Soviet empire to unify against their new secular rulers under a common religious identity. Overall, the analysis of border formation by Castañeda et al. (2022) sheds new insights on the conflict-reducing effects that can be gained when rulers set borders by taking into account ethnolinguistic information on the ground.

This research is valuable not only from a methodological and historical perspective, but also because of its relevance for understanding more recent events that stem from the formation and breakup of the Soviet Union and continue to affect contemporary geopolitics. In a long speech given on February 21, 2022, a few days before the invasion of Ukraine, Russian President Vladimir Putin said: "Leninist, substantially confederal, state structure and the slogan about each nation's right to self-determination […] were built in the foundation of the Soviet State" and asked: "Why was it necessary to satisfy the […] nationalist ambitions of different parts of the former [Russian] empire? Why giving them newly-formed, often arbitrarily created, huge administrative units – union republics – that often had nothing to do with them [titularity nations]?" The study by Castañeda et al. (2022) provides a possible answer to Putin's (rhetorical) question. According to their analysis (and contrary to Putin's claim), the Soviet rulers did not create their republics "arbitrarily," but designed them (almost) optimally to minimize heterogeneity costs, in ways that helped them control their empire for over seventy years. In light of subsequent historical developments, an open question is then whether there might have been a trade-off between more control in the short run versus a higher likelihood of instability and breakup in the longer run. A related question is whether the effects of decentralization on Soviet border stability might have been "non-monotonic" - that is, positive at the beginning, when a modicum of empowerment within a federal structure reduced hostility by the peripheries towards the central government, but negative later on, when the Soviet Union eventually broke up into fifteen separate republics.

In general, this line of theoretical and empirical research can contribute to the debate on whether federalism and decentralization along "natural" lines (ethnic, linguistic, religious, etc.) should lead to border stability or instability in the longer run - a discussion that has been prominent among political scientists and experts of international relations, especially after the collapse of the Soviet Union (Bakke and Wibbels, 2007). The standard view has been that federalism is border-stabilizing, especially in societies that are very heterogenous along ethnic or cultural lines. Several prominent social scientists have argued that federal states tend to do better than unitary states by reducing ethnic conflict and minority discrimination (Lijphart, 1990; Weingast, 1995; Bermeo, 2002; Inman and Rubinfeld, 2005). Other scholars, in contrast, have argued that federal arrangements facilitated the breakups of Yugoslavia and the Soviet Union (Roeder, 1991; Suny, 1993). Motivated by these questions, Spolaore (2010) studied the relation between federalism and country stability and provided a model of the interplay between centrifugal and centripetal effects of decentralization and federalism. In that framework, decentralization reduces the incentives to secede at higher levels of decentralization, but it might increase the incentives to break up at lower levels of decentralization. The threshold above which decentralization is stabilizing depends on the effects of conflict. When the use of force has a smaller impact on political outcomes, decentralization ensures more stability. In other words, federalism and decentralization are more likely to have a positive effect on stability and efficiency in societies where norms and institutions ensure that weapons and violence are *not* too effective at determining political borders.

In a recent contribution, Esteban et al. (2020) have proposed a theoretical model of conflict and secessions, whereby different ethnic groups might fight over control of the central government ("centrist conflict") or over the breakup of the country ("secessionist conflict"). These authors then bring the predictions of their theoretical model to the data and find that a peaceful union is less likely, with respect to both centrist and secessionist conflict, when the ethnic groups that are not in control of the government are relatively larger. They also find that cultural similarity reduces the risk of secessionist conflict relative to centrist conflict and peaceful union.

These theoretical and empirical contributions suggest that the relation between heterogeneity and conflict is indeed central for understanding the dynamics of political borders. While much remains unknown about this interplay, recent research has shed new light on the links between conflicts and various measures of heterogeneity along historical, cultural, linguistic, and religious lines, building on previous work by Alesina et al. (2003), Fearon (2003), and Mecham, Fearon and Laitin (2006) (see also Ginsburgh and Weber, 2011 and Spolaore and Wacziarg, 2016a).

A key empirical question within this area of inquiry is whether diversity of ethnic or cultural origins is associated with more or less conflict between groups and populations (for a discussion, see Spolaore and Wacziarg, 2019). Views on this issue have often been polarized. On the one hand, there is the view that diverse groups, by interacting and cooperating with each other, can converge on common values and achieve peaceful integration. Earlier instance of this optimistic view can be found in Haas (1958, 1964) and Deutsch (1964). On the other side are those who view ethnic and cultural differences as direct causes of conflicts and wars (for example, Sumner, 1906, and, more recently, Huntington, 1993, 1996). Microeconomic studies have connected ethnic heterogeneity to undersupply of local public goods (e.g., see Alesina and La Ferrara 2005), while there is also macroeconomic evidence of negative correlations between measures of ethnolinguistic fractionalization and public outcomes (a seminal contribution in this area is Alesina et al., 2003). Montalvo and Reynal-Querol (2005) and Esteban, Mayoral and Ray (2012) showed that ethnic polarization is associated with civil conflict. Desmet, Ortuño-Ortín and Wacziarg (2012) found that linguistic distances between major linguistic families predict civil conflict, while finer distinctions between languages negatively affect the provision of public goods. Looking more specifically at the breakup of former Yugoslavia, Desmet et al. (2011) found that measures of historical relatedness between ethnic groups helped predict the timing of their violent breakup, consistent with the view that populations that were ethnically and culturally more distant from the central government had larger incentives to secede. Overall, this empirical evidence is consistent with ethnic and cultural heterogeneity going hand in hand with lower provision of public goods, more civil conflict, and a higher likelihood of secessions.

However, there is also evidence that international wars are more likely to occur between sovereign states inhabited by populations that are *more closely related* along historical and cultural lines, controlling for geographical proximity and other geographic characteristics (Spolaore and Wacziarg, 2016b). How to reconcile the evidence of the relationship between heterogeneity, civil conflict, and secessions mentioned above with these results about international conflict? A plausible interpretation is that the impact of heterogeneity depends on whether groups are fighting over control of public (nonrival) goods or private (rival) goods. As already mentioned, heterogeneous preferences and traits negatively affect the provision of public goods, which are nonrival in consumption and must therefore be shared by everyone within a political jurisdiction, whether one likes them or not. In contrast, diversity across individuals and groups comes with benefits when considering interactions about rival goods, because a variety of preferences and worldviews can be associated with lower levels of antagonism over private goods. Moreover, “Leviathans” who rule different states are more likely to fight with each other over a given territory if they anticipate that it will be less costly to rule it because its population has more similar political and cultural preferences to the conqueror. In contrast, rulers may be more reluctant to engage in wars over territories that they anticipate might be more costly to rule because of higher political heterogeneity. Thus, heterogeneity costs associated with more diverse populations, paradoxically, can also help explain why we are more likely to observe international wars between *more similar* populations, all other things being equal, while civil conflict over control of public goods is more likely to occur among populations at a higher cultural distance from each other (Spolaore, 2008; Spolaore and Wacziarg, 2016c, 2019).

In a recent contribution, Guarnieri (2022) provides new evidence that civil conflict is explained by ethnic groups' cultural distance to the central government, and that the mechanism driving the effects of cultural distance on conflict is differences in preferences over public goods. That is, cultural distance causes conflict over control of the government (a nonrival good), but it does not trigger conflict over territory or resources (rival goods). These results are consistent with the hypothesis about the relationship between heterogeneity and conflict discussed above. In this respect, neither the "optimist" view nor the "pessimist" view is completely accurate: ethnic and cultural heterogeneity can increase *or* reduce conflict, depending on what the conflict is about: public or private goods. This is another instance where an economic approach to political outcomes, based on logic and empirical evidence, can provide a fuller and more nuanced understanding of the phenomena under consideration.

A final observation - and a major challenge for both theoretical and empirical research - is that, in the longer run, heterogeneity of preferences, values and beliefs, as well as key cultural cleavages and identities, are themselves endogenous – that is, affected by social, political, and economic factors. For instance, religious identities played a major role in the historical determination of borders in the Lower Countries, but became much less salient over time, as other dimensions (linguistic and economic) took center stage in the contemporary politics of Belgian borders. In general, the nature and impact of different cultural and ethnic dimensions is likely to respond endogenously to changes in the configuration of borders and to specific public policies, such as "nation-building" (Weber, 1976; Alesina and Spolaore, 2003, pp. 76-77; Alesina, Giuliano and Reich, 2021). Ethnicity and culture are fluid concepts, with a complex relationship between them and with conflict. Interestingly, Desmet, Ortuño-Ortín, and Wacziarg (2017) find that, globally, there is little overlap between ethnic identity and cultural identity. They also find that ethnic diversity itself has no effect on civil conflict. Conflict is more likely when differences in ethnicity coincide with differences in culture. Thus, a promising direction for future research is to link more closely the economic analysis of political borders to the growing literature on the economics of culture and cultural change. Analyses and discussions of the relations among culture, institutions and political and economic outcomes are provided, for instance, by Tabellini (2008), Bisin and Verdier (2010, 2021), Alesina and Giuliano (2015), Mokyr (2017), Spolaore (2019), and Acemoglu and Robinson (2021), among many others.

## 4. Concluding Remarks

This paper has reviewed theories and empirical studies of political borders and conflict from a politico-economic perspective. A general message from these studies, as noted for example in Alesina and Spolaore (2015), is that economic theories of the formation and breakup of political jurisdictions can contribute to the policy debate by bringing considerations of pros and cons, alternative choices, and trade-offs to an area of intense political controversy, which is often dominated by extremist and partisan perspectives.

A fundamental question, which has repeatedly emerged in the economic literature on borders and conflict, is how to define and measure the impact of multi-faceted factors such as culture, ethnicity, language, and social interactions. While the economic analysis of borders and conflict has significantly helped social scientists to reach a broader understanding of these topics, much remains to be done within this fascinating and expanding field, using cultural and historical data and mechanisms to understand economic and political dynamics. When considering the effects of factors such as culture and identity on political and institutional outcomes – including political borders – causal effects often tend to work in both directions: cultural forces can affect borders and institutions, but culture and identity themselves are endogenous variables, impacted by political and economic factors.

Ultimately, as the contributions that we have discussed illustrate, an economic approach to political borders is most effective when open to the inclusion of multiple perspectives, relying on concepts and data from diverse areas of research. As always, much more can be learned when economists and other scholars mutually cross the (often artificial) borders of their respective disciplines.

## References

Acemoglu, Daron and James Robinson (2021), “Culture, Institutions and Social Equilibria: A Framework,” NBER Working Paper No. 28832, May.

Alesina, Alberto (1988), “Macroeconomics and Politics,” *NBER Macroeconomics Annual*, 3.

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg (2003), “Fractionalization,” *Journal of Economic Growth*, 8: 55–194.

Alesina, Alberto, William Easterly and Janina Matuszeski (2011), “Artificial States,” *Journal of the European Economic Association*, 9(2), 246--277.

Alesina, Alberto and Paola Giuliano (2015), “Culture and Institutions,” *Journal of Economic Literature*, 53(4), 898-944.

Alesina, Alberto, Paola Giuliano, and Bryony Reich (2021), “Nation-Building and Education,” *Economic Journal*, 131(638), 2273-2303.

Alesina, Alberto and Eliana La Ferrara (2005), “Ethnic Diversity and Economic Performance,” *Journal of Economic Literature*, 43(3), 762-800.

Alesina, Alberto and Enrico Spolaore (1997), “On the Number and Size of Nations,” *Quarterly Journal of Economics,* 112 (4), 1027-1056.

Alesina, Alberto, and Enrico Spolaore (2003), *The Size of Nations*. Cambridge, MA: MIT Press.

Alesina, Alberto and Enrico Spolaore (2005), “War, Peace and the Size of Countries,” *Journal of Public Economics*, 89 (7), 1333-1354.

Alesina, Alberto and Enrico Spolaore (2006), “Conflict, Defense Spending, and the Number of Nations,” *European Economic Review*, 50(1), 91-120.

Alesina, Alberto and Enrico Spolaore (2015), “What’s Happening with the Number and Size of Nations?” *E-International Relations*, November 9.

Alesina, Alberto, Enrico Spolaore and Romain Wacziarg (2000), “Economic Integration and Political Disintegration,” *American Economic Review*, 90(5), 1276-1296.

Alesina, Alberto, Enrico Spolaore and Romain Wacziarg (2005), “Trade, Growth, and the Size of Countries” in Philippe Aghion and Steven N. Durlauf (eds) *Handbook of Economic Growth*. Amsterdam: Elsevier, vol. 1, chapter 23, 1499-1542.

Alesina, Alberto and Romain Wacziarg (1998), “Openness, Country Size and Government,” *Journal of Public Economics*, 69 (3), 305-321.

Asiwaju, A. I. (1985), "The Conceptual Framework." in A. I. Asiwaju (ed.) *Partitioned Africans: Ethnic Relations Across Africa's International Boundaries, 1884–1984*, 1–18. New York: St. Martin Press.

Bakke, Kristin M. and Erik Wibbels (2006), "Diversity, Disparity, and Civil Conflict in Federal States," *World Politics*, 59 (October), 1-50.

Bentham, Jeremy (1789), *An Introduction to the Principles of Morals and Legislation*, republished by New York: Hafner Publishing Co., 1948.

Bermeo, Nancy (2002), "The Import of Institutions," *Journal of Democracy*, 13 (2), 96-110.

Bisin, Alberto and Thierry Verdier (2010), "The Economics of Cultural Transmission and Socialization," in Jess Benhabib, Alberto Bisin, and Matt Jackson (eds.), *Handbook of Social Economics*, Elsevier.

Bisin, Alberto and Thierry Verdier (2021), "On the Joint Dynamics of Culture and Institutions: Elites and Civil Society," Manuscript, New York University and Paris School of Economics (first draft, 2015).

Bolton, Patrick and Gérard Roland (1997), "The Breakups of Nations: a Political Economy Analysis," *Quarterly Journal of Economics*, 112 (4), 1057-89.

Bolton, Patrick, Gérard Roland and Enrico Spolaore (1996), "Economic Theories of the Breakup and Integration of Nations," *European Economic Review*, 40: 697-705.

Bordignon, Massimo and Sandro Brusco (2001), "Optimal Secession Rules," *European Economic Review,* 45, 1811-34.

Castañeda Dower, Paul, Andrei Markevich and Ekaterina Zhuravskaya (2022) "Control through Empowerment: Evidence from Nation-Building in Soviet Central Asia," presented at the Scientific Conference in Memory of Alberto Alesina, Bocconi University, Milan, May 24-25.

Cervellati, Matteo, Sara Lazzaroni, Giovanni Prarolo and Paolo Vanin (2019), "Political Geography and Pre-Industrial Development: A Theory and Evidence for Europe 1000-1850," CEPR Discussion Paper No. DP13719.

Conquest, Robert (1986), *The Harvest of Sorrow: Soviet Collectivization and the Terror-Famine*, Oxford: Oxford University Press.

Desmet, Klaus, Michel Le Breton, Ignacio Ortuño-Ortín and Shlomo Weber (2011), "The Stability and Breakup of Nations: a Quantitative Analysis," *Journal of Economic Growth*, 16, 183-213.

Desmet, Klaus, Ignacio Ortuño-Ortín, and Romain Wacziarg. 2012. "The Political Economy of Ethnolinguistic Cleavages," *Journal of Development Economics,* 97 (1): 322–332.

Desmet, K., I. Ortuño-Ortín, and R. Wacziarg. 2017. "Culture, Ethnicity and Diversity." *American Economic Review* 107 (9): 2479–2513.

Deutsch, K. W. 1964. "Communication Theory and Political Integration." In *The Integration of Political Communities*, edited by Philip E. Jacob and James V. Toscano: 46-74. Philadelphia: J. B. Lippincott.

Ellingsen, Tore (1998), "Externalities and Internalities: a Model of Political Integration," *Journal of Public Economics*, 68 (2), 251-68.

Esteban, J., L. Mayoral, and D. Ray. 2012. "Ethnicity and Conflict: An Empirical Study." *American Economic Review* 102 (4): 1310–1342.

Esteban, J., and D. Ray. 2011. "Linking Conflict to Inequality and Polarization." *American Economic Review* 101 (4): 1345–1374.

Esteban, Joan, Sabine Flamand, Massimo Morelli, and Dominic Rohner (2022), "Stay, Split or Strike: Theory and Evidence on Secessionist vs Centrist Conflict," Manuscript.

Fearon J. (2003), "Ethnic and Cultural Diversity by Country," *Journal of Economic Growth*, 8, 195–222.

Fernández-Villaverde, Jesús, Mark Koyama, Youhong Lin, and Tuan-Hwee Sng (2020), "The Fractured-Land Hypothesis," NBER Working Paper No. 27774, September, forthcoming in the *Quarterly Journal of Economics*.

Findlay, Ronald (1996), "Towards a Model of Territorial Expansion and the Limits of Empires," in Michelle R. Garfinkel and Stergios Skaperdas (eds.), *The Political Economy of Conflict and Appropriation*, Cambridge University Press, Cambridge UK.

Friedman, David (1977), "A Theory of the Size and Shape of Nations," *Journal of Political Economy*, 85: 59-77.

Gancia, Gino, Giacomo Ponzetto and Jaume Ventura (2022), "Globalization and Political Structure," *Journal of the European Economic Association*, 20 (93), 1276-1310.

Gennaioli, N. and H.-J. Voth (2015), "State Capacity and Military Conflict," *Review of Economic Studies*, 82(4), 1409–1448.

Ginsburgh, Victor and Shlomo Weber (2011), *How Many Languages Do We Need? The Economics of Linguistic Diversity*, Princeton: Princeton University Press.

Goyal, Sanjeev ad Klaas Staal (2004), "The Political Economy of Regionalism," *European Economic Review*, 48, 563--593.

Guarnieri, Eleonora (2022), “Cultural Distance and Ethnic Civil Conflict,” Manuscript, University of Exeter.

Haas, E. B. (1958), *The Uniting of Europe: Political, Social, and Economic Forces, 1950–1957*. London: Stevens.

Haas, E. B. (1964), *Beyond the Nation State: Functionalism and International Organization*. Stanford, CA: Stanford University Press.

Haimanko, Ori, Michel Le Breton and Shlomo Weber (2005), “Transfers in a Polarized Society: Bridging the Gap between Efficiency and Stability,” *Journal of Public Economics*, 89 (7), 1277-1303.

Harsanyi, John (1955), “Cardinal Welfare, Individualistic Ethics, and Interpersonal Comparisons of Utility,” *Journal of Political Economy*, 63: 309–21.

Inman, Robert and Daniel L. Rubinfeld (2005), “Federalism and the democratic transition: lessons from South Africa,” *American Economic Review*, 95 (2), 39-43.

Le Breton, Michel and Shlomo Weber (2003), “The Art of Making Everybody Happy: How to Prevent a Secession,” *IMF Staff Papers*, 50 (3), 403-435.

Lijphart, Arend (1990), “The Power-Sharing Approach,” in Jospeh V. Montville (ed) *Conflict and Peacemaking in Multiethnic Societie*s, Lexington, MA: Lexington Books, pp. 491-510.

Huntington, Samuel (1993), “The Clash of Civilizations.” *Foreign Affairs* 72 (3): 22–49.

Huntington, Samuel (1996), *The Clash of Civilizations and the Remaking of World Order*. New York: Simon and Schuster.

Martin, Terry (2001), *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923-1939*, Ithaca: Cornell University Press.

Mecham, R. J. Fearon and D. Laitin (2006), “Religious Classification and Data on Shares of Major World Religions,” Manuscript, Stanford University.

Michalopoulos, Stelios and Elias Papaioannou (2016), “The Long-Run Effects of the Scramble for Africa,” *American Economic Review*, 106(7): 1802–1848

Mokyr, Joel (2017), *A Culture of Growth*: *The Origins of the Modern Economy*. Princeton and Oxford: Princeton University Press.

Montalvo Jose G. and Marta Reynal-Querol (2005), “Ethnic Polarization, Potential Conflict and Civil War,” *American Economic Review*, 95(3): 796-816.

Murdock, George Peter (1959), *Africa: Its Peoples and their Culture History*. New York: McGraw-Hill.

Oates, Wallace (1999), "An Essay on Fiscal Federalism," *Journal of Economic Literature*, 37, September, 1120-1149

Rawls, John (1971), *A Theory of Justice*, Cambridge (MA): Harvard University Press

Riker, William (1964), *Federalism: Origin, Operation, Significance*, Boston: Little, Brown and Company.

Roeder, Philip G. (1991), "Soviet Federalism and Ethnic Mobilization," *World Politics*, 43 (2), 196-232.

Spolaore, Enrico (2004), "Economic Integration, International Conflict and Political Unions," *Rivista di Politica Economica*, 94, 3-50.

Spolaore, Enrico (2006), "National Borders and the Size of Nations," in Barry R. Weingast and Donald A. Wittman (eds), *The Oxford Handbook of Political Economy*, Oxford University Press, Oxford, 778-798.

Spolaore, Enrico (2008), "Civil Conflict and Secessions," *Economics of Governance*, 9 (1), 45-63.

Spolaore, Enrico (2010), "Federalism, Regional Redistribution, and Country Stability," Chapter 13 in Nuria Bosch, Marta Espasa and Albert Sole Olle (eds) *The Political Economy of Inter-regional Fiscal Flows. Measurement, Determinants and Effects on Country Stability*, Edward Elgar Publishing: Cheltenham.

Spolaore, Enrico (2012), "National Borders, Conflict and Peace," Chapter 30 in Michelle R. Garfinkel and Stergios Skaperdas (eds), *Oxford Handbook of the Economics of Peace and Conflict*: 763-786, Oxford University Press: Oxford.

Spolaore, Enrico (2013), "What is European Integration Really About? A Political Guide for Economists," *Journal of Economic Perspectives*, 27(3): 125-44.

Spolaore, Enrico (2016), "The Economics of Political Borders," in *Economic Analysis of International Law*, edited by Eugene Kontorovich and Francesco Parisi, Cheltenham: Edward Edgar.

Spolaore, Enrico (2020), "Commanding Nature by Obeying Her. A Review Essay on Joel Mokyr's A Culture of Growth," *Journal of Economic Literature,* 58(3), 777-92.

Spolaore, Enrico and Romain Wacziarg (2005), "Borders and Growth," *Journal of Economic Growth*, 10 (4), 331-386.

Spolaore, Enrico and Romain Wacziarg (2016a), "Ancestry, Language and Culture," in *The Palgrave Handbook of Economics and Language*, edited by Victor Ginsburgh and Shlomo Weber, 174–211. London: Palgrave Macmillan.

Spolaore, Enrico, and Romain Wacziarg (2016b), "War and Relatedness," *Review of Economics and Statistics* 98 (5): 925–939.

Spolaore, Enrico and Romain Wacziarg (2016c), "The Diffusion of Institutions." In *Complexity and Evolution: Toward a New Synthesis for Economics*, edited by David S. Wilson and Alan Kirman, 147–166. Cambridge, MA: MIT Press.

Spolaore, Enrico and Romain Wacziarg (2019), "The Political Economy of Heterogeneity and Conflict" in *Disrupted Economic Relations: Disasters, Sanctions, Dissolutions* edited by Tibor Besedeš and Volker Nitsch, Cambridge (MA): MIT Press

Sumner, W. G. (1906), *Folkways*. New York: Ginn.

Suny, Ronald G. (1993), *The Revenge of the Past: Nationalism, Revolution, and the Collapse of the Soviet Union*, Stanford, CA: Stanford University Press.

Tabellini, Guido (2008), "Institutions and Culture," *Journal of the European Economic Association Papers and Proceedings*, Presidential Address, 6 (2-3), 255-294.

Voigtländer, Nico and Hans-Joachim Voth (2013) "The Three Horsemen of Riches: Plague, War, and Urbanization in Early Modern Europe," *Review of Economic Studies* 80, 774–811.

Turchin, Peter, T.E. Currie, E.A.L. Turner, and S. Gavrilets (2013), "War, Space, and the Evolution of Old-World Complex Societies," *Proceedings of the National Academy of Sciences* 110(41), 16384–16389.

Weber, Eugene (1979), *Peasants into Frenchman: Modernization of Rural France, 1870-1914*, Chatto and Windus.

Weese, Eric (2015), "Political Mergers as Coalition Formation: an Analysis of the Heisei Municipal Amalgamations", *Quantitative Economics*, 6(2): 257-307.

Weingast, Barry R. (1995), "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Growth," *Journal of Law, Economics, and Organization*, 11, 1-31.

Wittman, Donald A. (2000), "The Wealth and Size of Nations," *Journal of Conflict Resolution*, 6, 885-895.