

ECONOMIC THEORIES OF POLITICAL (DIS)INTEGRATION

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Abstract. This paper surveys the recent political economy literature on countries' incentives to form international unions and/or to disintegrate in smaller jurisdictions. The main factors that affect these incentives are (i) economic integration, (ii) the international order, (iii) international spillovers and (iv) the institutional setting. Some implications are drawn for the current debate in Europe on the political effects of economic integration, on the enlargement process and on the distribution of prerogatives between the European Union and national governments.

Keywords. Political integration and separation; International Unions

1. Introduction

Political borders around the world and the number of countries, as well as the functions attributed to governments, have varied a lot in recent history. In Europe, after the collapse in 1989 of the international order established by the Cold War, we observed four phenomena. First, several countries disintegrated (for example, USSR and Czechoslovakia). Second, other countries delegated more power to local governments, in response to an increasing demand for regional autonomy (for example, the UK and Italy). Third, the European Union (EU) increased its size from 12 to 25 members. Last, the EU enlarged its scope, because member countries chose to give up sovereignty on prerogatives, such as monetary policy, historically held by national states.¹

A recent economic literature is addressing questions that used to be in the sphere of political science: what are the incentives of countries to integrate or separate? How do globalization of markets and the post cold war international order affect these incentives? The process of economic integration and institution building in Europe is an interesting laboratory to address these questions and has attracted the interest of many researchers in this area. According to this research, other relevant questions are: How will deeper economic integration change political borders in Europe? Why is the EU enlarging to East and Central Europe?

How will the institutional setting affect incentives to enlarge and how will enlargement modify actual institutions?

The goal of this paper is to briefly survey the main results of the political economy literature on political integration/separation of nations, to show where we stand and what are possible avenues for future research. We present a formal approach that focuses on a basic trade-off that shapes countries' incentives to integrate and separate. We review the literature in an original way that highlights the main factors that affect political integration decisions.²

The basic mechanism underlying this formal approach to political (dis)integration is as follows: as the jurisdiction enlarges, the economic benefits of political integration are offset by an increasing political cost due to the heterogeneity of citizens (with respect, for example, to preferences over public goods provision or income distribution). This trade-off endogenously determines the optimal size of the jurisdiction.

The main factors that affect decisions about forming larger (or smaller) political entities are the following:

- Economic integration (i.e. increase in trade and factor mobility)
- International security considerations
- Existence of international spillovers
- Institutional setting (mainly decision mechanisms and institutional rules).

Each of these factors influences either the costs or benefits of political (dis) integration and moves the trade-off in one direction or the other, leading to more or less political integration.

In the next section, a simple model is described. Then, papers will be presented according to their contribution to the understanding of the above four factors. Each section contains a review of the main results and concludes indicating avenues for future research. Concluding remarks are in the final section.

2. Political Integration: A Basic Trade-Off

We start by describing a very simple model of country formation. This model, originally due to Alesina and Spolaore (1997), captures the idea that countries are similar to clubs: individuals form a common jurisdiction or country because countries provide a set of public goods that citizens need, such as defence, law and order, a monetary system, etc.³ Needless to say that the issue of country formation is much more complicated and that it has several other relevant dimensions like differences in language, culture, etc. that are not addressed in this framework. The aim of this section, however, is not to provide a complete theory of political integration, but only to highlight in a simple way a trade-off that is relevant to the determination of the size of countries.

We assume that the world population is immobile and uniformly distributed over the interval $[0,1]$. Moreover, we assume that the geographical and ideological distributions coincide. This implies that people who are geographically closer to each other have similar preferences on what the optimal policy should be.

Countries are a segment of this interval. When agents (or groups of agents) change country, i.e. join a different club, they take their location with them. This determines borders between countries.

In the economy, there is one private good and one non-rival, but excludable, public good. Each citizen in the world is endowed with the same amount of private good y . The public good g has a fixed cost K that is financed through lump-sum taxation and is independent of the size of the country.

The utility of the generic agent i is given by the following equation:

$$u_i = c_i + g(1 - as_i) \quad (1)$$

where c_i is the consumption of the private good, s_i is the size of the country where agent i lives and a is a positive parameter that measures the cost of size.

Looking at equation (1), we can get a sense of the forces that shape country formation in this model. First, notice that utility is highest for $s_i = 0$, that is when the country is formed only by agent i . The reason is that in this case, the government has the same location, i.e. preferences, of the agent. The larger the size of the country s_i , the greater is the distance between the agent's preferred policy and the government, the lower is the utility that agent i receives from consuming the public good.

Second, $c_i = y - \tau$, where τ is the per capita tax rate. Having assumed that the cost of the public good is fixed and independent of the size of the country, the larger is the number of people in a country, the smaller is τ and the larger is per capita private consumption. In other words, there is an economy of scale in the production of the public good.

Assume to start with a world of total political disintegration where each agent is a country. As the political jurisdiction enlarges, the economic benefits of integration, here captured by the economy of scale in public good provision, are compensated with the increasing distance from the government (the cost of heterogeneity). This trade-off endogenously determines the optimal size of the jurisdiction.

To solve this problem analytically, we imagine a social planner who chooses the size of countries in the world – and therefore their number – in order to maximize the utility of the world population. Given the symmetry of the problem and, more importantly, the uniformity assumption of the distribution of the world population, it can be easily shown that the social planner would choose countries of the same size. This fact simplifies the planning problem to

$$\max_s y - \tau + g(1 - as)$$

subject to the budget constraint

$$s\tau = K \quad (2)$$

Solving this maximization, we obtain the optimal size of countries:

$$s^* = \sqrt{\frac{K}{ga}} \quad (3)$$

The size s^* optimizes over the trade-off between distance and cost of government.

Not surprisingly, the optimal size is decreasing in the cost of distance a and the benefit of public good g and increasing in the fixed cost K of public good provision.⁴

In the rest of the paper, we study how economic integration, international security, international spillovers and institutions affect this basic trade-off.

3. Economic Integration

A first set of issues is related to the link between economic integration (i.e. the development of free trade and factor mobility) and political integration/separation, that is, the formation of larger (smaller) political jurisdictions providing some sort of public goods. The basic question these models address is the following: how does globalization of markets affect the incentives of countries to integrate or separate?

As an illustrative example, consider the case in which agent i 's income in equilibrium is a positive function of the size of the country where he lives:

$$y = [(1 - \theta)s + \theta]^\rho \quad (4)$$

where $1 \leq \rho \leq 0$ and θ is a parameter that measures the degree of openness of the economy. For $\theta = 1$, world economic integration is maximal; for $\theta = 0$, each country produces in autarky. This formulation captures the following idea. If we live in a fully globalized world ($\theta = 1$), the size of a country does not influence income levels: each agent in any part of the world can profitably trade with any agent in any other part of the world. As the degree of countries' openness reduces, the size of countries matters: in larger countries, it is easier for agents to find profitable opportunities for trade, thus increasing their income.

Equation (4) can be obtained from a model where a final good is produced using intermediate goods whose production involves individual-specific capital (Alesina *et al.*, 2000). Because individuals can happen to be in the same country or in different countries, production involves within as well as across country transactions. Intermediate goods are sold in a competitive market within a country. However, for production to occur, agents also need to obtain intermediate goods from other countries. In this case, costs associated with international trade are incurred. The extra costs that borders create are captured by (the inverse of) parameter θ in equation (4).

In this section, our main goal is to understand how the degree of openness of the world economy influences political (dis)integration. Similarly to the previous section, we proceed by finding the optimal size of countries s^{**} by maximizing the utility of the representative agent (1) subject to the budget constraint (2) and the economic constraint given by equation (4).

The first order condition that implicitly determines the optimal size of countries is:

$$\rho(1 - \theta) [(1 - \theta)s^{**} + \theta]^{\rho-1} + \frac{K}{s^{**2}} - ga = 0 \quad (5)$$

From the last equation we get that $\frac{ds^{**}}{d\theta} < 0$. In this simple setting, economic integration, by reducing the cost of international transactions, decreases the benefits of size and induces political disintegration.

This is the main result in Alesina *et al.* (2000). They note that in a world of trade restrictions (at the limit in a world of autarkic countries), large nations enjoy economic benefits, because political boundaries determine the size of the market. The presence of increasing returns in the size of the economy, for example, would lead to unambiguous economic benefits from political integration. However, under free trade and global markets, the incentive to join large jurisdictions disappears, while the cost in terms of heterogeneity of national preferences remains. In this case, not only will countries not integrate, but small cultural, linguistic and ethnic groups within countries can choose to form smaller and more homogeneous political jurisdictions. In other words, international economic integration could lead to political disintegration, because it reduces the cost of political separation.

Casella and Feinstein (2002) also deal with the interaction of trade and political integration. They study a model where the link between economic and political integration comes from the fact that the public good directly affects returns from trade. Trade takes place in the market, where a market is a group of agents that exchange private endowments, while the public good is provided by the jurisdiction (a club of individuals that decide together, share and finance a common public good).⁵ In their analysis, economic integration, by raising the gains from trade, induces political integration at least initially. The reason is that, at low levels of economic integration, the marginal benefit of provision of common public goods outweighs the political cost of forming a union. However, at higher levels of economic integration, the benefit may well be smaller than the cost of political integration, leading to separatism.

Casella and Feinstein (2002) and Alesina *et al.* (2000) capture two different aspects of the effects of economic developments on countries' incentive to integrate (separate) and have very different implications for political developments in Europe. In the framework of Casella and Feinstein (2002), when the market becomes large, individuals may well realize that their preferences about policy and institutions are more similar to those of other trading partners, outside national borders. Therefore, economic integration is accompanied by fragmentation in multiple jurisdictions, but also by an incentive to form new jurisdictions that will reshape national borders.⁶ This result is driven by the complementarity of market integration and political integration. Instead, in Alesina *et al.* (2000), economic and political integration are substitutes. This is why in their model, integration of markets leads only to political disintegration. As a consequence, what this model predicts is the idea of 'Europe of regions': the creation of the European single market is the motivation behind the growing demand of regional autonomy.

A different set of papers concentrates on the role of government to redistribute income across agents. Bolton and Roland (1996) show that in this setting, greater factor mobility (at the limit, a perfect mobility of both labour and capital), inducing an equalization of redistributive policies across countries, reduces (and at the limit removes) the motive for political separation. The intuition is the following: in the presence of perfect factor mobility, any equilibrium under

political separation is such that all countries have the same policy. If a country deviates, for example imposing higher taxes on labour, workers would immediately migrate to a different country with lower taxation. Equilibrium policies being the same, formal political independence is meaningless. As a consequence, globalization, increasing factor mobility, helps to homogenize countries' preferences over policies and reduces political obstacles to international political integration.

These models do not capture the need for political, legal and social institutions for the effective functioning of markets, but these non-market institutions can emerge only if political integration expands with economic integration.⁷ Put it in another way, as Rodrik (2001) notices: 'this disjuncture between the reach of markets and the scope of non-market institutions has adverse consequences for economics: economic integration remains necessarily incomplete, limiting the gains to be reaped from open trade and investment policies'. Bolton *et al.* (1996) notice that, even though recent history seems to support the assumption that economic integration can develop smoothly independently of any form of political integration, the issue is not at all clear. The reason being that smaller nations usually benefit from greater economic integration only when there is at least one superpower able to play the role of the international 'policeman' and enforce free trade agreements across countries. In a different international order, for example the period before World War II, it is not clear that such an assumption would hold. In other words, can free trade and factor mobility develop without any form of political integration in the long run? Part of these questions are addressed in the next section; however, further work will be required to provide a better understanding of the relationship between economic and political integration.

4. International Security

International security is the oldest of the reasons for political integration. Examples of attempts to integrate independent political entities for security reasons date back at least to classical Greece.

Recently, some political economists addressed the following question: how does the international order affect the economic incentives of political integration? International security considerations are not, strictly speaking, economic reasons to integrate/separate countries, but the link with economic problems is so relevant that some papers are emerging in the formal political economy literature that directly addresses this issue and its relationship with trade. Borrowing Findlay's (1996) words, quoted by Spolaore (2001): 'Insofar as they are considered at all in economics, the boundaries of a given economic system or country are generally regarded as given [...]. The process by which these boundaries are determined and defined clearly depends on the interplay of economic and military forces, which have, however, generally been regarded as independent factors'.

In this section, we provide a model where the international order influences economic activity. The reason for this link is that, while domestic conflicts are solved by law and the existence of courts, international conflicts are either solved by international bargaining or wars. In both cases, as discussed by Tullock (1980), the benefits for citizens in a certain country are increasing in the military strength of the country relative to the opponent.⁸

Following Alesina and Spolaore (2004a), we assume that there are only two possible states of the world: conflict and no conflict. A conflict between any two countries occurs with probability p . Assume that the income of an agent living in country i is now given by the following equation:

$$y_i = y + e_i \quad (6)$$

where with y we denote the safe income, while e_i is the expected amount of resources that agent in country i receives after a (possible) international conflict is resolved.

Assume that individuals are randomly matched pairwise. When two agents trade, they produce a pool of resources equal to $2e$, which has to be divided. In case of peaceful confrontation between countries i and j , both agents get a positive profit e from the transaction. In case of a conflict, agents in country i receive an amount of resources, call it e_{ij}^c , that depends on the defence spending of country i relatively to country j . We capture this fact in the simplest way by assuming that

$$e_{ij}^c = \frac{d_i}{d_i + d_j} 2e \quad (7)$$

where d_i is the amount of money spent on defence by the country where agent i lives.

Overall, the expected amount of resources e_i is given by:

$$e_i = [1 - (1 - s)p]e + (1 - s)p \sum_{j \neq i} \frac{s}{1 - s} e_{ij}^c \quad (8)$$

where the first term represents the amount of resources that an agent in country i gets from trading with other agents in the same country or with foreign agents in case of a peaceful confrontation. The second term gives us the resources that an agent in country i receives when facing conflicts.

In order to find the optimal size of countries, we need to solve first for the optimal level of defence spending. Each government chooses how much money to devote to defence, d , in order to maximize the utility of the representative agent (1), subject to equations (6–8) and the budget constraint

$$s\tau = K + d$$

where we took into account that defence is a non-rival public good.

Given the symmetry of this setting, the solution to this problem is the optimal defence spending, d^* , for a given configuration of countries – i.e. for a given size of countries s – where

$$d^* = \frac{s(1-s)pe}{2} \quad (9)$$

Notice that in a politically integrated world (i.e. $s = 1$), optimal defence spending would be null. If political separation kicks in (i.e. $s < 1$), countries will want to spend in defence policy and their optimal spending is increasing in the probability of international conflict p . However, the larger the size of countries s , the lower is optimal per capita defence spending. This last result comes from the fact that agents living in larger countries can easily find other agents to trade with in a peaceful way within their country borders and need less defence spending to protect their transactions.

Having obtained the optimal per country spending on defence, we find the optimal size of countries by allowing a social planner to choose s to maximize equation (1) subject to conditions (6–9). The solution of this problem is:

$$s^{***} = \sqrt{\frac{K}{ga - pe}} \quad (10)$$

Comparing equation (10) with its counterpart in the basic setting (3), we see that the probability of conflict affects political integration. More precisely, in a less conflictual world (decrease in p), incentives to form larger jurisdictions decrease leading to political disintegration. The reason is that in a less bellicose world, the risk of losing good trade opportunities with foreigners in conflicting countries decreases reducing the benefits of size.

Alesina and Spolaore (2004b) extend this setting to consider a more general conflict resolution technology, in which both peaceful international bargaining and non-peaceful confrontations between nations are possible. This framework allows to study the effects of the rule of international law on political integration. Not surprisingly, an extension of international control rights, reducing the importance of national defence, has the same effect as a decrease in the probability of conflict (p) on the size of countries. Overall, the main insight of these models is that ‘incentives to form larger political unions are likely to be higher in a more bellicose, anarchic world, but a reduction in those incentives, by inducing political fragmentation, may bring about its own dose of actual international tensions’ (Alesina and Spolaore, 2004b p. 24).

Spolaore (2001) explicitly links international conflict, incentives to integrate/separate and trade. This relationship goes in both directions: an increase in international conflict, reducing mobility, inhibits trade relations; on the other hand, more intense trade relations imply higher economic losses in the case of war, thus reducing the probability of conflicts between trade partners. This model has interesting implications: when conflict affects trade, multiple equilibria are possible. Therefore, for given fundamentals, different equilibria can be reached depending on expectations and the international political coordination of strategies. Two geopolitical scenarios are possible. In a world of high economic integration and low conflict, the size of political jurisdictions matters less, and

small units are possible in equilibrium. In a less open and more conflictual environment, the economies of scale in defence and the benefits from a larger domestic market are more important; therefore, large political units will result in equilibrium.

Research that takes into account the interplay of military and economic forces is in its infancy. However, its importance is self evident in studying political integration as well as political separation: as noted in the introduction, both these phenomena have deeply accelerated in Europe after the end of the international order determined by the Cold War.

An interesting extension of this line of research would be to include in the framework institutional aspects such as the democratic decision process and the scope and rules of supranational organizations that play an important role in determining the extent of free trade and conflict.

5. International Spillovers

Up to this point, we have limited government activity to the provision of public goods that have no effect on the utility of citizens living in other countries. In this setting, political integration reduces the cost of public good provision or, more generally, creates some sort of economy of scale. In reality, however, governments engage in a number of activities that produce international spillovers, that is, governments decide policies that influence the welfare of citizens who live beyond national borders.

The existence of such international spillovers is a traditional argument in favour of political integration and is related to the theory of fiscal federalism. Oates' famous Decentralization Theorem states that the provision of public services should be located at the lowest level of government encompassing all benefits and costs.⁹ When there are important international spillovers, the natural implication of this theory is to delegate prerogatives to an international level of government (i.e. to form an international union) capable of internalizing all relevant externalities. This main idea is at the heart of several recent works on political integration.

In order to show the basic trade-off underlying the choice of political integration in the presence of international spillovers, we modify the model of section 1. First, we assume that the world is divided into two countries, i and j , of equal size. Second, in the economy, there are three goods: the private good and two country-specific public goods, g_i and g_j . Think of these public goods as infrastructure, environmental rules, and also trade and monetary policy. Third, there are two distinct political regimes: political separation and political integration. Under political separation in each country, a government is in charge of producing one and only one public good. Under political integration, an international authority can produce both public goods. In what follows, we will refer to the political integration regime as an international union. More specifically, an international union is a group of countries that jointly provide some sort of public goods.

The main innovation of this section is to allow public goods in one country to affect the utility of agents in the other country. This is captured by the following formulation for individual preferences:

$$u_i = c_i + \alpha_i [\ln g_i + \beta \ln g_j] \quad (11)$$

where α_i is a preference parameter for public good provision for an agent in country i and $\beta \in [0,1]$ is the spillover effect from public good provision in country j .¹⁰ For now, we assume that all agents in country i have the same preferences α_i , but these preferences can possibly differ from the preferences in country j .

This utility function is telling us two important things. First, citizens in one country would like to influence the policy decision in the other country because their welfare is directly affected by this decision. However, under political separation, citizens do not have a technology for influencing policies in other countries. Second, under political integration, the heterogeneity of preferences across countries over public good provision may lead, under some circumstances, to a conflict over policy decisions.

To solve the model, we first consider equilibrium policies under political separation and integration and then we move to study the choice of integration. Under political separation, government i unilaterally chooses public good provision in order to maximize the utility of citizens in country i . This implies that public goods provision in each country will form a Nash equilibrium where each government fails to internalize the effect of its decision on the citizens of the other country. The equilibrium public good provision under separation is given by:

$$g_i^S = \alpha_i \quad (12)$$

Under political integration, an international authority chooses public good provision in order to maximize the utility of the world population. Assuming that this international authority can target different levels of public good provision for different countries, it would be able to fully internalize spillovers and avoid a conflict of preferences between the different countries. The equilibrium public good provision under integration is given by:

$$g_i^I = \alpha_i + \beta \alpha_j \quad (13)$$

$$g_j^I = \alpha_j + \beta \alpha_i \quad (14)$$

In this simplified setting, political integration would produce the same utility to world citizens as political separation only in the case of no international spillovers ($\beta = 0$), and it would produce a higher utility in presence of spillovers ($\beta > 0$). This leads us to an obvious question: why is the world not a single country?

Alesina *et al.* (2003) built a model where the cost of political integration is due to a failure of the international authority to provide different levels of public goods for different countries. The reason for this failure is mostly political: in a world of otherwise identical countries, it would be politically difficult to implement country-specific policies contingent on countries' preferences.

Suppose that the international authority chooses the same policy g for both countries (for example, at the level preferred by the world median voter). In this case, the equilibrium public good provision would be:

$$g^J = \frac{(1 + \beta)(\alpha_i + \alpha_j)}{2} \quad (15)$$

Simple inspection of equations (12–15) clearly shows the basic trade-off underlying the choice of political integration in presence of international spillovers. Consider extreme cases:

- if the two countries have the same preferences (i.e. $\alpha_i = \alpha_j = \alpha$), political integration still delivers a higher welfare in the presence of spillovers ($\beta > 0$).
- if the two countries are different ($\alpha_i \neq \alpha_j$), political integration is still welfare improving for sufficiently large spillover effects.¹¹

The intuition is that political integration has a cost because it moves the equilibrium policy away from the country-specific equilibrium policy. This political cost must be traded off with the economic benefits deriving from the internalization of spillovers.¹²

Etro (2001) extends this framework in two directions. First, he considers the interaction between nations that form a union and countries that choose to stay out of the union in a setting in which spillovers affect both insiders and outsiders. Second, he takes into account positive and negative spillovers as well as different kinds of interdependence between countries' policies (i.e. strategic complementarity and substitutability).¹³ He shows that a union is more likely to emerge when policies are characterized by strategic complementarities, while under strategic substitutability of the policies, the union may even be unfeasible. The reason is that, when policies are strategic substitutes, the policies chosen by the union members move toward efficiency, but the outsiders' policies move in the opposite direction. This makes outsiders better off and, possibly, insiders worse off; therefore, all countries will choose to stay out of the union. Under strategic complementarities, both outsiders and insiders will move their policy towards efficiency and the international union is unambiguously welfare improving.

Persson and Tabellini (2000) provide a simple version of Bolton and Roland (1997) where the heterogeneity between countries, rather than being in preferences, is in income distribution. In the same set up we just studied, assume that $\alpha_i = \alpha_j = \alpha$, but $y_i > y_j$ and taxation is proportional. In this case, the international authority provides the optimal level of public good to both countries and fully internalizes spillovers; however, country i (the rich country) will have to bear a larger share of the tax burden. Therefore, country i will be in favour of political integration only if the positive effect in public good provision is larger than the negative redistributive effect.

The achievement of these models has been to build a formal framework to think about the political economy of political integration in the presence of spillovers in public goods provision. However, the setting is too simple to be realistic. First, governments have several prerogatives that have different spillover

effects on other countries. Second, the international authority might adopt institutional rules that reduce the cost of political integration. Third, politics in an integrated world (or in an international union) may differ from politics at the national level. This is what we turn to study in the next section.

6. Institutional Setting

How does the design of national and supranational institutions affect the incentive of countries to integrate and separate? The economic theory of political integration has indicated that there are two aspects of the institutional setting that matter: the decision mechanism, both at the national and supranational levels, and the institutional rules, in particular the assignment of prerogatives to the international union.

In this section, articles are divided in two groups. The first subsection surveys models that explain how decision making, both at national and supranational level, affects integration/separation decisions. The second set of papers considers alternative institutional rules (more flexible versus more rigid, more centralized versus more decentralized) and their effects on incentives to form a union or to join an existing one.¹⁴

In general, this literature has highlighted that the more the decision power is on national states and the larger the flexibility and the decentralization of the institutional setting, the more countries will be willing to join a union. However, a large increase of flexibility and decentralization, by inducing coordination problems among member states, may harm the functioning of the union.

6.1 *The Decision Mechanism*

We consider how majority voting, international legislatures and a federal voting scheme influence political integration.

Alesina and Spolaore (1997) study how democracy affects the incentive of nations to integrate/separate by comparing the social planner's solution for the size of countries (3) with the equilibrium that would emerge in a setting where first citizens choose what country to join and then policies are set by majority voting.

The main result is the following: majority voting in each country determines in equilibrium too many small nations. This is because voters at the margins do not internalize the negative externalities, in terms of lost economic benefits, imposed on other voters and prefer to form small nations in order to get public goods closer to their preferences. In other words, when countries are formed through a democratic process, more countries are created than with a social planner who maximizes world average utility. As a consequence, an international union, aggregating small nations, moves the equilibrium number of countries towards efficiency, but it is likely to be politically unstable if secession rules are not sufficiently strict.¹⁵

A possible solution is to use transfers: Alesina and Spolaore (1997) take into account compensation schemes such that individuals, who are located far from the government, are compensated so that they would not vote in favour of a secession. However, the credibility of these compensation schemes is problematic because of time inconsistency: when a union is created, a majority can always change the policy. The problem is again in the decision mechanism, but now, it is the timing that matters: once international arrangements on the borders of the union are set, it is always possible to change the union policy. Foreseeing this problem, voters with preferences far from the union government will vote against integration in the first place.

Haimanko *et al.* (2003) extend this setting to consider polarization of preferences for the public policy. Their main result is that, if preferences are sufficiently polarized (i.e. there is a high intra-group homogeneity and intergroup heterogeneity), a union may be politically unstable even with strict secession rules. This increases the need for transfer schemes that, however, will not emerge as a political equilibrium (as in Alesina and Spolaore, 1997).¹⁶

Several recent works on the political economy of fiscal federalism study in more detail how decisions are taken under political integration.¹⁷ Rather than looking at how the decision mechanism influences the incentive of countries to integrate, these studies deal with the efficiency properties of equilibria under political integration and separation under different decision mechanisms.¹⁸ To the extent that political integration increases efficiency (inefficiency), countries are going to be more (less) likely to pay the political cost of abandoning sovereignty.

Besley and Coate (2003) and Lockwood (2002), using the model of section 5, determine the equilibrium public good provisions under the assumption that under political integration, central authorities can provide different levels of public goods to different countries. Here, the cost of giving up sovereignty derives instead from the fact that the central authority works as a legislature composed of national representatives. In the setting by Besley and Coate (2003), where there is within-country heterogeneity, but the rules of operation of the central legislature are rather special, political integration may lead to inefficiencies due to over provision of public goods through strategic delegation. In contrast, Lockwood (2002) considers more general rules of operation of the legislature but assumes within-country homogeneity. Depending on such rules, weaker international spillovers and more cross-country heterogeneity need not increase the efficiency gains from political separation.

A different question to be addressed is how the decision-making process at the supranational level affects the incentive of external countries to join an international union. Piketty (1996) studies how a federal voting mechanism could solve the problem of large cross-country externalities combining the benefits of common decision making with those of flexibility. The reason for using a different mechanism is that simple majority in an international union would induce voters to internalize these externalities but would harm countries whose most preferred policy is too far from the union median. These countries could choose not to enter

the union in the first place, reducing the benefits of integration for the other members. The federal mechanism consists in a sort of double voting in which first the policy is chosen by majority rule at the union level, and then each country decides whether to enact the policy or not. The reason why this mechanism induces a larger number of countries to enter the union is that when choosing the policy in the first stage, voters take into account the effects of their decision on stage two. In other words, the union policy is chosen in a way that minimizes inefficiencies in the second stage (i.e. such that a sufficiently large number of countries will enact it).

6.2 *Distribution of Prerogatives and Institutional Rules*

In this subsection, we move to study how the scope of central governments and the adoption of flexible and/or decentralized rules affect the incentives of nations to (dis)integrate.

We extend the model in two directions. First, we allow for a larger number of countries indexed by $i = 1, \dots, N$, where N is the total number of countries in the world. Second, we generalize the setting by assuming that each government provides K public goods indexed by $k = 1, \dots, K$. Public goods have different spillover effects on different countries. More precisely, β_{ij} is the externality that public good provision in country j has on the utility of agents in country i . We can think of the values of β as depending on the economic structure or the geographical distance of two countries. Therefore, preferences of the representative agent in country i are the following:

$$u_i = c_i + \sum_{k=1}^K \alpha_i^k \left[\ln g_i^k + \sum_{j \neq i, j=1}^N \beta_{ij} \ln g_j^k \right] \quad (16)$$

This setting allows us to address several new issues of relevance for political integration and, more specifically, the formation of international unions.

Alesina *et al.* (2003) study the formation and enlargement of international unions and the distribution of competencies between national governments and the international union authorities. The trade-off that we observed in the simpler model of the last section also emerges in this more general setting. Accordingly, countries that form an international union are those that satisfy the following two conditions. First, their citizens have not too dissimilar preferences over the range of public goods provided by the international authority (homogeneity condition). Second, cross-country spillovers are relevant (externality condition). That is, the benefits of political integration need at least to compensate the cost consisting in the loss of political autonomy.

This theory of formation of international unions has relevant implications. First, increasing the prerogatives attributed to the international organization (i.e. reducing the sovereignty of national states) will diminish the equilibrium size of the union. Second, with a simple majority rule, the political equilibrium implies a bias towards excessive centralization and small size of the union. Alesina

et al. (2003) consider arrangements that emerged in the context of the EU-like enhanced cooperation, subsidiarity, federal mandates and earmarked grants and show that, by reducing policy uniformity and adding flexibility, these arrangements partly reduce the trade-off between size and scope of the union.

The intuition of the former result is quite straightforward: increasing the scope of the union will augment the dimensions of heterogeneity of preferences across national states and therefore the political cost of entry, inducing many countries to stay out. The latter result comes from a time-consistency problem: once the union is formed, a majority of members will want to increase the scope of the union. Perceiving this risk, many countries will step back from the beginning. This result highlights the necessity of a constitution that specifies *ex ante* the prerogatives attributed to the union.

The experience of the EU of the last 50 years partly contradicts this theory. First, there seems to be a tendency to enlarge both the size and the scope of the union. The number of EU members has increased from six in 1957 to 25 in 2004. Moreover, Alesina *et al.* (2001) calculate that the effective number of prerogatives, that is, policy areas where the EU has been active by producing legislation, has substantially increased in the same time spell. Second, there is a partial inconsistency between this theory and the evidence on the allocation of competencies between the EU and national governments. Alesina *et al.* (2001) show that the EU is active in areas where international spillovers are low and heterogeneities in countries' preferences are large – e.g. agriculture – and it is not active in areas such as defence and foreign policy where the opposite is true.

Brou and Ruta (2004) and Ruta (2003) build a model where public goods have different effects on different groups of people within the same country and where certain groups are politically organized to lobby their government as in Grossman and Helpman (1994). The reason is that several policies, like commercial policy, look more like targeted public goods, that is, public goods that have few beneficiaries and whose cost is spread over the entire society, and are often largely influenced by special interest politics. In this setting, they show that both the size and the prerogatives assigned to an international union can be affected by lobbying activities within the union. This could help to fill the gap between the theory on the political economy of international unions – as laid out in Alesina *et al.* (2003) – and the evidence for the EU.

Casella and Frey (1992) propose a different set of institutional rules, called functional federalism, characterized by high decentralization. 'Functional federalism differs from the traditional hierarchical system of federalism, where government functions are ordered according to a pyramidal organization among jurisdictions, towards more flexible forms of cooperation. Individuals organize themselves in a pattern of overlapping jurisdictions without explicit ranking, with each jurisdiction responsible for the provision of a specific class of public goods. In this model, agreements have variable membership, depending on the scope of the policy under consideration, and each single unit may therefore form treaties with different other units, in a highly decentralized system of intersecting alliances' (Casella and Frey, 1992, p. 640).

The benefit of functional federalism lies in its Pareto-improving nature, because centralized political decisions will be taken through a process of bargaining between all affected parties. However, there are a number of reasons to be sceptical of the effectiveness of excessive decentralization and of voting schemes that give too much power to lower level governments: problems could arise on how to divide surpluses generated by the bargain; unless there is perfect information, all countries would seek strategic advantages by concealing information on costs and benefits; enforceability of agreements would be problematic; implementation costs may become very large if this form of organization is pushed to extreme diversification. In other words, coordination would become highly problematic. The Federalist Papers provide many historical examples of the difficulties of implementation of this sort of agreement.¹⁹ Nevertheless, as noted by Oates (1999) for the American case, some forms of decentralized coordination do offer an important avenue for addressing certain inter-jurisdictional concerns. Moreover, as it has happened in recent European history for the Monetary Union and the Schengen Treaty, 'à la carte' agreements have been very powerful in introducing new forms of integration that can be extended later to the entire international union.²⁰

Two observations can suggest future avenues for research. First, the very fact that new nations will choose to participate in an international union may require changes in the institutional setting of the union. In other words, size and scope are deeply linked and need to be studied together. In particular, in a highly decentralized system, countries have bigger incentives to join a union; however, as size increases, coordination problems will be harder to solve. Second, as suggested by Inman and Rubinfeld (1997a), a deeper analysis is required to understand how different rules and decision mechanisms affect not only economic efficiency, but also other relevant dimensions of a system of governance such as political participation and protection of liberties.

7. Concluding Remarks

The main contribution of the economic theories of political (dis)integration has been to depart from traditional economics that, with only few exceptions, has taken the international order as given and national states as the natural unit of analysis.²¹ Instead, the political economy approach to integration considers border formation as endogenously determined by the interaction of economic and political factors.

The principal results that characterize this literature consist in the formal discussion of the effects of politico-economic factors (economic integration, international security, the existence of international spillovers and the institutional setting) on countries' incentives to integrate and separate. A task for future research in this field will be to extend the framework in two directions. First, some aspects of these four factors are not fully understood. In particular, the interaction of political and economic integration and the effects of alternative institutional settings – such as different decision mechanisms, distribution of

prerogatives and rules of supranational organizations – need to be studied more in depth, while the literature on the interplay of military and economic forces is in its infancy. Second, we still miss a theory of the formation of international unions that could take into account how these four factors interact to shape countries' incentives to (dis)integrate.

The literature surveyed in this paper is particularly relevant for the current debate in Europe on the political effects of economic integration, on the enlargement process of the EU and on the distribution of prerogatives between the supranational and the national governments. However, the hottest issue – the interaction of the institutional design and the size and scope of the EU – has only recently begun to be analysed with formal models and needs further attention.

Acknowledgements

I thank Daniel Brou, Alessandra Casella, Federico Etro, Yadira Gonzales de Lara and Stanislaw Wellisz for discussions and two referees for very useful comments. Errors are only my responsibility.

Notes

1. An empirical investigation on how the role of the EU has changed in the last 30 years is in Alesina *et al.* (2001). They find that the prerogatives attributed to the EU have expanded considerably in the 1990s.
2. Part of the literature is also reviewed in Bolton *et al.* (1996), Persson and Tabellini (2000) and Drazen (2000). For a more detailed discussion along the same lines refer to Alesina and Spolaore (2003).
3. Early works that have a similar structure are Guesnerie and Oddou (1981) and Greenberg and Weber (1986).
4. The optimal size of countries chosen by the social planner is also the size of countries that would be selected by referendum if the world population were asked to vote on the (equal) size of countries. We will come back on the effects of – better specified – political institutions on the incentives to (dis)integrate in section 6.
5. A related article is Casella (2001). In this paper, preferences over public goods provision are not necessarily correlated with geographical location: groups of people with similar preferences may belong to different countries. As a consequence, not only regional but also (private) international jurisdictions can be formed that provide public goods specific to the needs of these international communities.
6. This interesting implication has many supporting examples in recent history. Let me mention just two of them. In Italy, the debate in 1998 on whether to join the Monetary Union since the beginning was characterized by the proposal of the Northern League to let the regions of the North of Italy enter and let the South wait. Their argument was precisely based on the observation that those regions were more economically integrated with other European regions (in particular the German Bavaria) than the rest of Italy. A second example is related to the break up of Czechoslovakia. The Czech Republic shortly after seceding from Slovakia applied to join the EU. Having in mind the spirit of this model, a plausible explanation is the following: the increasing economic integration of the Czech part of Czechoslovakia with the EU after the end of the Cold War has increased the benefits of a common jurisdiction with the EU for

- the Czechs and reduced the benefits of political integration with the Slovakian part of the country. At the heart of the change in borders is the pattern taken by economic integration.
7. Casella (1996) suggests that institutional basis necessary to support efficient international trade is provided not only by political integration, but also by international coalitions of private agents. International commercial arbitration is an important example of these private coalitions. However, the extent to which these international coalitions of private individuals can emerge without some form of international order and their implications for other values like political participation and protection of liberties is a debatable issue.
 8. Kant (1795) first made this point. International conflicts, even when solved peacefully through international bargaining, differ from domestic conflicts for one main reason: the possibility of making war.
 9. For a recent survey on fiscal federalism, see Oates (1999).
 10. In general, spillovers may be positive (in this case, we have prosper-thy-neighbour policies) or negative (beggar-thy-neighbour policies); however, for the sake of simplicity, we only consider the case of positive spillovers.
 11. This result is also in Ellingsen (1998).
 12. I shall come back to other results of Alesina *et al.* (2003) in the next section.
 13. Etro (2001) follows Cooper and John's (1988) terminology, by defining the policies of two countries as strategic complements if, when one country moves its policy towards the first best level, the other country does the same; the policies are strategic substitutes otherwise.
 14. To be more precise, some of these models only deal with the economic efficiency of certain rules. However, efficient international institutions increase the benefits of joining a union. A related discussion, on the effects of institutional rules on participation in the World Trade Organization (WTO), is contained in Bagwell and Staiger (2002). They point out one particular aspect of the WTO rules: the two pillars – reciprocity and the most favourite nation clause – imply a deep protection of small countries' interests. This could contribute to explain the participation of a large number of countries in this organization.
 15. Alesina and Spolaore (1997) show that the efficient number of countries is politically stable if the secession rule requires unanimity in a seceding nation, but it is not stable under simple majority voting. Bordignon and Brusco (2001) study the optimal constitutional rules to avoid inefficient secessions in a federation, while Jehiel and Scotchmer (2001) focus on constitutional rules of exclusion (rules through which countries deny immigration status or expel residents) and jurisdiction formation.
 16. Note that both Alesina and Spolaore (1997) and Haimanko *et al.* (2003) use only linear compensation schemes. It is not clear if different schemes, as direct transfers to regions with highly polarized preferences, would be politically sustainable.
 17. A detailed account of the political economy of fiscal federalism is beyond the scope of this survey. The interested reader can refer to Inman and Rubinfeld (1997b).
 18. A different political economy approach sees the drawbacks of political integration in the deepening of political agency problems. On this, see Seabright (1996) and Tommasi and Weinshelbaum (2003). The main idea is that political integration solves the international coordination problem, but worsens the principal agent problem between citizens and the government.

19. Hamilton *et al.* (1987) discuss the problems of coordination that occurred among independent political units in Classical Greece, the German Empire of the ninth century, the Helvetica Confederation and The Netherlands.
20. In other words, one of the benefits of allowing such form of cooperation among countries joining a union is the fact that they can function as laboratories for the entire union. The idea is very similar to what Justice Brandeis (1932), quoted by Inman and Rubinfeld (1997a), noted: 'It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country'.
21. Even if not very numerous, exceptions are quite relevant and include writings by Robbins (1937, 1939, 1944) and Einaudi (1943, 1944). More recently, a departure in this dimension from mainstream economics can be considered the analysis of Optimum Currency Areas (Mundell, 1961) and the theory of fiscal federalism (Oates, 1972). Both theories show that the proper level of government is not necessarily the national level, but it can be the supranational, national or local depending on economic efficiency.

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