Secession and Exit: An Analysis of Two Competing Hypotheses

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Abstract
We consider a region that pays taxes to a central government, but receives a fraction of the central government’s transfers that is smaller than the region’s relative tax contribution. The residents of the fiscally exploited region have three choices: continue to subsidize the other regions, move to a different region, or secede. Which of the three alternatives will the residents of the exploited region choose? How is their course of action affected if the regions differ in their per capita incomes and their ethnolinguistic characteristics? In the present study we address these questions.

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1. Introduction

During a trip to the Norwegian fjords, one of us learned how some of the fjords’ early residents avoided paying taxes by building their houses on the fjords’ steep slopes. When the tax collector visited their area they pulled up the ladder leading to their residence, leaving the collector with no way of reaching their home. Many other cases of fiscally-induced secession can be found throughout history. Yet economists have turned their attention to secession only recently, and especially after the publication of a seminal paper by Buchanan and Faith (1987). Prior to that, inspired by Tiebout’s classic work (1956), economists were focused on external exit. Also referred to as “voting with their feet”, external exit suggests that people will move to the administrative jurisdiction whose provision of public goods matches best their personal preferences.

Buchanan and Faith assumed that secession is driven by fiscal exploitation, a situation in which the members of a sharing coalition extract transfers from the government while, despite paying taxes, the members of the non-sharing coalition cannot. The threat of secession by the non-sharing coalition places a limit, however, on fiscal exploitation, because if the members of the non-sharing coalition find it less costly to form a separate polity and finance the provision of a necessary public good such as defense on their own they will secede. On the other hand, if the members of the non-sharing coalition cannot be prevented from joining the sharing coalition, then under certain conditions they will all do so and secession will be rendered unnecessary. Clearly then, external exit presents an alternative to secession. So why might secession take place when exit is an option?

To answer the question we construct a model in which the regions of a polity pay an income tax to a central government that provides a national public good like defense, and a number of local public goods such as roads, education, law enforcement, etc. The fact that the central government is responsible for the provision of local public goods opens the door to fiscal exploitation, which occurs when the government allocates to a region a fraction of its spending on local goods that is smaller than the region’s relative tax contribution. The government does not keep any of the tax revenue, so the sole purpose of fiscal exploitation is to subsidize the consumption of local goods in a different region. Faced with such an “injustice”, the residents of the exploited region have three
options: do nothing, move to a subsidized region, or secede. The aim of the paper is to examine whether the presence of differences in the per capita incomes and the cultural, ethnic, religious, and linguistic characteristics (henceforth grouped under the term ethnolinguistic) of the regions increases the likelihood that the residents of the exploited region will choose secession over exit.

Because secession is driven by fiscal exploitation, our work can be viewed as an extension of the work by Buchanan and Faith, and different from that of Bolton and Roland (1997) who assumed that secession is instigated by differences in the people’s preferences over the degree of income redistribution and, thus, the tax rate. It is also different from the work of Olofsgard (2003) who assumed that secession is instigated by the pursuit by different ethnic groups of a more “nationalistic” policy, since we retain the assumption that secession is driven by economic factors.

As shown in section 2, we find that when the regions are identical and people are perfectly mobile then the government is unable to exploit a region for the benefit of another. As in Buchanan and Faith, migration from the exploited region (non-sharing coalition) to the subsidized region (sharing coalition) eliminates exploitation, so there is no reason for a region to secede. When the regions differ in their per capita incomes migration results in an exploitative allocation and facilitates secession. Fiscal exploitation is the outcome, however, of the actions of optimizing individuals, not of the government. As people move to the rich region in which they can earn a higher income, per capita consumption of local goods in the rich region falls. Migration will stop when the per capita consumption of local goods in the rich region becomes smaller than that in the poor region.¹ The rich region will thus be fiscally exploited, but its residents will not want to exit since moving to the subsidized region will result in a reduction in their income. Secession may thus be their only viable strategy.

The presence of ethnolinguistic differences in addition to income differences has an ambiguous effect on the likelihood of secession. We assume that because people prefer to reside in a region with ethnolinguistic characteristics similar to their own they are reluctant to move even when moving is justified by economic factors. When small, the reduction in the mobility of the population may decrease the degree of fiscal exploitation.

¹ Implicit here is the assumption that the consumption of local goods is characterized by congestion effects.
exploitation of the rich region and, therefore, the likelihood that the rich region will secede. But if the people are unwilling to move even when the economic incentives to do so are strong, then the government may have the power to exploit one region for the benefit of another, thus increasing the likelihood of secession and regional conflict.

In section 3 we present a number of case studies that can perhaps be understood better under the prism of our theoretical framework. We try to understand, for example, the rationale behind certain provisions in Kofi Annan’s recent plan for the re-unification of Cyprus, which can be viewed as a case of secession in reverse. We also discuss the separatist movement of Padania in northern Italy, and the Movement for the Survival of the Ogoni People in Nigeria. In the concluding remarks presented in section 4 we address the limitations of our model, and suggest possible extensions.

2. The model

Consider a union of two regions, $A$ and $B$. Each region is populated by $l_j$ individuals, where $j \in \{A,B\}$. The union’s population is equal to:

$$L = l_A + l_B.$$  

(1)

Each region has an aggregate income of:

$$Y_j = l_j y_j,$$  

(2)

where $y_j$ denotes per capita income in region $j$. For simplicity we assume that individual income is the same for all the residents of a region. The union’s aggregate income is given by:

$$Y = Y_A + Y_B,$$  

(3)

while the union’s per capita income is equal to:

$$y = \frac{Y}{L}.$$  

(4)

The union spends an amount $G$ on a national pure public good, and an amount $S$ on a number of local public goods. To finance its spending the government imposes a linear tax on income, and balances its budget so that:

$$S + G = \tau \cdot Y,$$  

(5)
where \( \tau \) is the tax rate. The government divides its spending on local goods between the two regions, so:

\[
S = S_A + S_B
\]

where \( S_j \) denotes spending on local goods in region \( j \). Per capita spending on local goods in region \( j \) is given by \( s_j = \frac{S_j}{l_j} \). Each resident of region \( j \) has an indirect utility function given by:

\[
V_j = V[j(1 - \tau), G, s_j].
\]

We restrict the utility function so that \( V_j > 0 \), \( V_G > 0 \), and \( V_s > 0 \), where \( V_k \) denotes the marginal utility of the \( k \)th argument. We have assumed that local goods are characterized by congestion effects. Because, therefore, an increase in the population of a region reduces the per capita spending on local goods in that region, everything else being equal it also reduces the utility of the region’s residents. An increase in total spending on local goods in a region raises the utility of the region’s residents. An increase, finally, in the disposable income of the residents of a region caused by either an increase in pre-tax income or a decrease in the tax rate is also welfare-improving.

People participate in a two-stage game. In the first stage each person decides whether to move to the other region or stay put. Equilibrium in the first stage is reached when none of the union’s residents can increase their utility by moving. This will be true when the following condition holds:

\[
V_j(s_B^* - s_A^*) + V_j[y_B(1 - \tau^*) - y_A(1 - \tau^*)] = 0.
\]

A star superscript denotes equilibrium levels. The first term on the left hand-side of equation (8) shows the change in the utility of a migrant caused by the difference in the per capita spending on local goods between the two regions. The second term shows the change in utility caused by the difference in the disposable income that the migrant can earn in the two regions. If the left hand-side of equation (8) is positive, then people will migrate from region \( A \) to region \( B \) since doing so will increase their utility. The residents of region \( B \) will stay put since moving to region \( A \) would lower their utility. The migration pattern will be reversed if the left hand-side of equation (8) is negative.
In the second stage each region decides whether to secede or stay in the union. A resident of a region will want to secede if the utility from seceding is greater than that from staying in the union so that:

$$V[y_j(1 - \tau_j), G, s_j] - V[y_j(1 - \tau^*), G, s_j] > 0.$$  \hspace{1cm} (9)

If condition (9) holds for one resident of a region it will hold for all the residents of the same region. The decision to secede will thus be unanimous. Condition (9) implies that a region will secede if it can provide the same amount of the national good and the same per capita amount of the local goods at a tax rate that is lower than that imposed by the union, so that:

$$\tau_j < \tau^*,$$  \hspace{1cm} (10)

where \( \tau_j = \frac{S_j + G}{Y^*_j} \). Equation (10) can be re-written as:

$$\frac{S_j + G}{Y^*_j} < \frac{S + G}{Y^*},$$  \hspace{1cm} (11)

and re-arranged to become:

$$Share_j < \frac{Y^*_j}{Y^*} + \frac{G}{S} \left( \frac{Y^*_j}{Y^*} - 1 \right),$$  \hspace{1cm} (12)

where \( Share_j = \frac{S_j}{S} \) denotes the share of the union’s expenditure on local goods allocated to region \( j \). Equation (12) represents a secession condition that applies to all the different cases that we will examine.

The first term on the right hand-side of condition (12) is the relative contribution of region \( j \) to the union’s tax revenue.\(^2\) If the union’s expenditure on the national good is zero, the second term on the right hand-side vanishes. A region will secede if it receives a share of the union’s spending that is smaller than the region’s relative tax contribution. If the union’s expenditure on the national good is positive and the income of each region is smaller than the income of the union so that \( Y^*_j < Y^* \), then the second term on the right hand-side of condition (12) will be negative. This means that a region may remain in the

\(^2\) To see this more clearly simply multiply the nominator and the denominator with the tax rate (\( \tau \)).
union even if the union pays to the region a share of its spending on local goods that is smaller than the region’s relative tax contribution. The reason is that if the region secedes it will have to finance the provision of public goods using a smaller tax base. Secession may thus prove to be more costly than fiscal exploitation.

If the difference between the share that a region receives and the region’s relative tax contribution is negative, then the absolute value of that difference shows the degree of fiscal exploitation. If the difference is positive then the region is being subsidized. The second term on the right hand-side of condition (12) shows the maximum degree of fiscal exploitation that is attainable without the region seceding. The maximum attainable degree of fiscal exploitation increases as the size of the region’s income relative to the size of the union’s income decreases, or as the union’s spending on the national good relative to its spending on local goods rises. We now examine three different cases.

Case 1: A homogeneous union.

Assume that per capita income is the same in both regions so that:

\[ y_A = y_B = y. \]  

(13)

Assume, in addition, that the populations of the two regions have identical ethnolinguistic characteristics. If there are no barriers to migration, and letting \( s = \frac{S}{L} \) denote per capita spending on local goods for the union, the following proposition will hold:

**Proposition 1:** Regardless of how the union allocates its spending on local goods between the two regions, per capita spending on local goods will be the same in both regions so that \( s^*_A = s^*_B = s \).

**Proof:** If \( s_B - s_A \neq 0 \) then, as equation (13) implies, equation (8) will be violated. People will migrate to the region with the higher per capita spending, thus reducing per capita spending on local goods in the region of destination and raising per capita spending in the region of origin. Migration will continue until the difference has been eliminated and equation (8) is met. Proposition 1 leads to the following corollary:
Corollary 1: Regardless of how the union allocates its spending on local goods between the two regions, each region will receive a share equal to its relative tax contribution. Since neither region will be fiscally exploited, neither region will secede.

Proof: If Proposition 1 holds, then $s_j = s \Rightarrow \frac{S_j}{I_j} = \frac{S}{L} \Rightarrow Share_j = \frac{I_j^*}{L}$. Equation (13) implies that multiplying the numerator with $y_j$ and the denominator with $y$ does not affect the equality. Doing so yields that $Share_j = \frac{Y_j^*}{Y}$. Migration thus eliminates fiscal exploitation and renders secession unnecessary.

Case 2: The regions have different economic characteristics.

Assume now that the regions differ in their levels of labor productivity, and that as a result a person can earn a higher income in region $B$. This implies that:

$$y_B - y_A > 0.$$  

(14)

If there are no barriers to migration, then the following proposition must hold:

Proposition 2: Regardless of how the union allocates its spending on local goods between the two regions, per capita spending on local goods in the rich region will be smaller than that in the poor region, so that $s_B^* - s_A^* < 0$.

Proof: Assume that $s_B - s_A \geq 0$. If condition (14) holds, then the left hand-side of condition (8) will be positive. People will move from region $A$ to region $B$ to take advantage of the higher per capita income there. Migration will reduce per capita spending on local goods in region $B$ and raise per capita spending on local goods in region $A$ until equation (8) is met. But since the second term on the left hand side of equation (8) is positive, for equation (8) to hold the first term must be negative, which will be true only if $s_B^* - s_A^* < 0$. Proposition 2 leads to the following corollary.
Corollary 2: As long as the union does not allocate all of its spending on local goods to the rich region, the rich region will be fiscally exploited and the poor region will be subsidized. Secession may thus be a viable strategy for the rich region.

Proof: If Proposition 2 holds, then \( s_B < s \Rightarrow \frac{S_B}{I_B} < \frac{S}{L} \Rightarrow Share_B < \frac{I_B^*}{L} \). According to (14) \( \frac{Y_B^*}{Y^*} < 1 \). If, therefore, it is true that \( Share_B < \frac{I_B^*}{L} \), then it must be true that \( Share_B < \frac{Y_B^*}{Y^*} \).

The rich region will secede if condition (12) is met, or will continue to be fiscally exploited otherwise. Since the poor region will be subsidized it will not want to secede.

Other things being equal, an increase in the difference between the per capita incomes of the two regions will result in a higher degree of fiscal exploitation for the rich region, thus increasing the likelihood that the rich region will secede. As the disparity between the per capita incomes of the two regions grows, the income of the rich region will account for a bigger fraction of the union’s income both because each person will earn an increasingly higher income in the rich region, and because a larger fraction of the population will choose to reside in the rich region. Not only will the rich region’s tax contribution grow relative to that of the poor region, but also the cost of secession for the rich region will decline making secession a more desirable option. Mathematically, the right hand side of equation (12) will increase making the inequality more likely to hold.

The central government may be able to find a compensation scheme that would prevent the rich region from seceding as in Le Breton and Weber (2003), but the model cannot say whether such a scheme would involve spending more or less on local goods in the rich region. Assume, for example, that the government allocates a bigger fraction of its expenditure to the rich region. The left hand side of equation (12) will increase, so secession will become less likely. But the right hand side of equation (12) will also rise as the re-allocation will generate a wave of migration from the poor region to the rich that will cause the tax base of the rich region to grow. Whether the government should spend more or less on the rich region depends on the magnitude of each effect.

Mathematically, the government should spend more/less on the rich region if:
\[
\frac{1}{G + S} \left< \frac{y_B^*}{Y^*} - \frac{y_A^*}{Y^*} (y_B^* - y_A^*) \right>.
\]

Equation (15) is obtained by differentiating both sides of equation (12) with respect to \( S_B \) and using that the equilibrium difference between the per capita spending on local goods in the two regions \((s_B^* - s_A^*)\) will not change, which implies that \( dS_B = dl_B \). We should mention that any change in spending on local goods in the rich region affects the likelihood of secession by altering the tax base of the rich region relative to that of the union. The government cannot influence, however, the per capita consumption of local goods in a region.

Decentralizing the provision of local public goods would allow the productive region to provide the same per capita consumption of local goods at a lower tax rate, prompting people to move from the poor region to the rich until all of the union’s residents have moved to the more productive region. The same outcome would be observed if the government allocated all of its spending to the rich region. Note that as long as an individual can earn a bigger income in the rich region, an outcome where the entire population resides in the rich region is more efficient, since it would allow the government to finance the provision of public goods with the smallest possible tax rate. Such an outcome would also eliminate any threats of secession.

**Case 3: The two populations have different economic and ethnolinguistic characteristics.**

Let us now extend the previous case by assuming that the initial populations of the two regions have different ethnolinguistic characteristics, and that people prefer to reside in a region with ethnolinguistic characteristics similar to their own. The term “different ethnolinguistic characteristics” may include cultural differences such as the difference in lifestyles between urban and rural areas or the difference in values between “red states” and “blue states”, as well as differences in the language spoken, in the predominant religion, or in the ethnic origin of the residents of different regions. A member of population \( i \in \{a, b\} \) residing in region \( j \in \{A, B\} \) has now a utility given by:

\(^3\) In American politics the term “red states” describes states where conservative values are predominant, while the term “blue states” refers to relatively progressive states.
\[ V_j^i = V^i \left[ y_j (1 - \tau), G, s_j, z_j^i \right]. \] (16)

The last argument \((z_j^i)\) denotes the distance between a person’s ethnolinguistic characteristics \((x_j)\) and the ethnolinguistic characteristics of the region they reside in \((x_j)\), so that \(z_j^i = \left| x_i - x_j \right|\), with \(V_z < 0\).

Assume that at the beginning of the first stage all the members of the type \(a\) population reside in region \(A\), while all the members of the type \(b\) population reside in region \(B\). Assume also that \(x_a - x_A = x_b - x_B = 0\). Condition (8) is now replaced by the two following conditions, one for each population:

\[
V_a^a (s_b^b - s_A^a) + V_a^y \left[ y_B (1 - \tau^a) - y_A (1 - \tau^a) \right] + V_z^a \cdot \left| x_B - x_A \right| \leq 0 \tag{17a}
\]

\[
V_b^b (s_A^b - s_b^b) + V_b^y \left[ y_A (1 - \tau^b) - y_B (1 - \tau^b) \right] + V_z^b \cdot \left| x_A - x_B \right| \leq 0 \tag{17b}
\]

The first condition states that in order for the members of the type \(a\) population to stay put, the change in their utility from moving to region \(B\) must be at most equal to zero. The second condition states the same thing for the members of the type \(b\) population. The presence of ethnolinguistic differences implies that \(x_A \neq x_B\).

If the ethnolinguistic differences between the two regions are small so that \(V_a^y \left[ y_B (1 - \tau) - y_A (1 - \tau) \right] + V_a^z \cdot z_b^d > 0\), then Proposition 2 and Corollary 2 will hold. If \(s_b^b - s_A^a \geq 0\) then equation (17a) will be positive, and people will migrate from region \(A\) to region \(B\) until equation (17a) becomes zero. This will be true only if \(s_b^b - s_A^a < 0\). In equilibrium, equation (17a) will hold as an equality while equation (17b) will hold as an inequality. As in the previous case, per capita spending on local goods in the rich region will be smaller than that in the poor region. But because the last term of equation (17a) is negative, the first-stage equilibrium difference in the per capita spending on local goods between the two regions will be smaller when ethnolinguistic differences are present. This happens because the utility cost to a person from residing in a region with characteristics different than her own reduces the net gain from moving to a region in which she can earn a higher income. Consequently, the degree of fiscal exploitation of the rich region will be smaller and so will the likelihood that the rich region will secede.
If the ethnolinguistic differences between the two regions are large so that initially
\[ V_{A}^{a}[y_{b}(1-\tau)-y_{A}(1-\tau)]+V_{z}^{a}z_{b}^{d}<0, \]
then the government can determine to an extent the level of per capita spending in each region. If for example \( s_{A} = s_{b} \), then equations (17a) and (17b) will both hold as inequalities. Even though the residents of the poor region can increase their income while maintaining the same level of consumption of local goods by moving to the rich region, the high cost of residing in a region with ethnolinguistic characteristics different than their own will prevent them from doing so. By spending more on the rich region the government can now increase the per capita consumption of local goods there, thus reducing the degree of fiscal exploitation and the likelihood that the rich region will secede. The higher is, for the members of ethnic group \( a \), the cost of residing in the rich region, the more the government can increase its per capita spending on local goods in the rich region before people start migrating from the poor region to the rich.

Note that if the difference between the ethnolinguistic characteristics of the two regions is small, only the rich region can be exploited to a degree determined by equation (12). But if the difference is sufficiently large then the government can exploit either region. Secession of the poor region becomes possible, whereas in the other two cases it was not. In conclusion, weak ethnolinguistic differences reduce the degree to which the rich region is fiscally exploited. Strong differences give the government the ability to exploit an ethnic region for the benefit of another, and may thus facilitate the development of political pressure groups as in Becker (1983), invite armed conflict over control of the government, or lead to secession. When, therefore, the ethnolinguistic differences among the regions of a union are significant, decentralization eliminates fiscal exploitation, deters secession, and reduces the incentives for the development of ethnic/regional political pressure groups.

3. Selected Cases

That fiscal exploitation has been the driving force behind at least some secessionist movements is undeniable. The most recent case in the United States that illustrates how fiscal exploitation may lead to secession or the threat of secession is that of Killington, a ski resort town in Vermont. Since March 2004, the residents of
Killington have voted to secede from Vermont. The main source of discontent according to secessionist activists is that for every dollar that Killington pays in taxes to the state, it receives only five cents in municipal and educational aid. The discontent has grown since 1997, when Vermont implemented a new system of financing education. Under the new system property taxes in wealthy communities like Killington rose significantly, but the spending on education in these communities did not.\(^4\) In other words, after the implementation of the new system the degree of fiscal exploitation has risen. The fact that the high income of the residents of Killington is tied to regional assets may explain why the residents of Killington, like the residents of the rich region in our model, prefer secession to exit.\(^5\)

Several scholars claim, however, that economic factors can explain only a small fraction of secessionist movements and attribute the rest to nationalism, which they consider to be a separate and unrelated reason. In some cases both approaches are employed as alternative explanations for the same secessionist movement. A group of scholars (Schmidtke, 1996; Tambini, 2001) has emphasized, for example, the importance of ethnic factors to explain the secessionist movement of Padania in northern Italy, while another group (Torpey, 1994; Woods, 1995) has emphasized the importance of socio-economic factors. Our framework suggests that ethnolinguistic differences may facilitate secession not instead or despite of economic factors but because of them, that ethnolinguistic differences may facilitate secession because, like economic differences, they create the potential for fiscal exploitation.

While it is true that the secessionists of Padania have tried to emphasize, or even create, a separate ethnic and cultural identity for that region, that fiscal considerations ignited and cultivated the separatist movement of Padania can be inferred from the writings of the supporters of the movement. Savelli (1992), for example, writes about the Italian central government that it “subtracts resources from the productive part of the country not in order to organize and manage the necessary public services, but to distribute them to the non-productive part…” And it is not a coincidence that Lega Nord gained popularity as Italy became more integrated with the European Union (EU), which

\(^4\) Source: CNN.com
means that the cost of providing security from outside forces, and thus the cost of secession, was greatly diminished. But why was there an effort to create a separate national identity for Padania?

One possible explanation consistent with our theory is that that effort was an attempt to maximize the benefits from a potential re-allocation of the central government’s expenditure on local goods brought about by the threat of secession. As shown in the preceding section, if the central government responded to the threat by allocating a bigger fraction of its spending to Padania but at the same time the re-allocation generated a wave of migration from the poorer regions of Italy to Padania, then the impact of the central government’s action on the welfare of the residents of Padania would be negligible. If, however, the residents of Padania were successful in creating for their region an ethnic and cultural identity that was quite distinct from that of the poorer regions of Italy, then perhaps they would be able to discourage the residents of other regions from moving there. By doing so they would be able to benefit more from the re-allocation. Although it is hard to prove the validity of this hypothesis, the fact that immigration is the only enemy other than the centralist state that the Lega has identified (Bull, 2003) may provide some evidence.

Cyprus is another case that illustrates how the interaction between ethnolinguistic differences and fiscal considerations may facilitate secession. Prior to its breakup in 1974, the state of Cyprus encompassed two distinct populations, a Turkish-Cypriot and a Greek-Cypriot that differed in their ethnicity, religion, and language. There are currently under way efforts by the United Nations to devise a plan that will convince the two populations to re-unite under one political entity. We can then perhaps interpret the provisions of the plan as the conditions under which secession would not have taken place, and examine whether the provisions that apply to fiscal matters are consistent with our theory.

Our theory suggests that the main benefit for different regions of forming a union is the economies of scale in providing such national public goods as defense. Although in the case of Cyprus one may identify more than one benefits, in a report submitted to

\[\text{In this case secession and decentralization are equivalent, since the residents of other parts of Vermont would still be able to move to Killington after it seceded.}\]
the government of the Republic Of Cyprus, Eichengreen et al (2004) note the significant gain from the unification due to the decrease in the per capita defense spending caused by the elimination of duplicate costs and the reduction in the need for each community to defend itself against the other. Our theory also suggests that, if due to the ethnolinguistic differences between the regions the different populations are relatively immobile, a strong central government may have the ability to exploit one region for the benefit of the other, and that that ability may result in regional conflicts over control of the central government and lead to secessionist movements. In the case of Cyprus the problem is magnified by paragraph 6 of Article 3 of the Annan plan, which allows for a transitional period a constituent state to “limit the establishment of residence by persons hailing from the other constituent state.” One should then expect the plan to also make specific provisions that would safeguard either community against the possibility of fiscal exploitation.

Indeed, according to the Annan plan the federal government is extremely limited in its ability to raise revenues, and is excluded from direct taxation which remains a privilege of the constituent states. In addition, the provision of local public goods remains a responsibility of the state governments. Finally, Article 1 of Attachment 7 states that the central government will transfer to the constituent states in proportion to their population no less that 50 percent of revenue from indirect taxation which is not transferred to the European Union. Given that per capita income is higher in the Greek-Cypriot state one might expect spending per capita to also be higher there. Allocating the revenues from indirect taxation to each state in proportion to their population may therefore entail transfers from the Greek-Cypriot state to the Turkish Cypriot state. It is unclear whether the provision was purposely drafted in this way in order to allow for some redistribution. These transfers should be eliminated, however, as the incomes per capita of the two regions converge.

The last example that we would like to offer is that of Nigeria. The oil sector in Nigeria provides 20% of GDP, 95% of foreign exchange earnings, and about 65% of budgetary revenues. Under Nigeria’s early Federal System, the region from which the federal revenue generating good was derived received the majority of the proceeds of

6 CIA World Factbook
royalties. The 1963 Republican Constitution specified that 50% of royalties be returned to the region of derivation. The discovery of petroleum reserves led the federal government to centralize control of revenues post 1970. By 1983 only 1.5% of oil revenues were allotted to the oil producing states on the basis of derivation. Revenues were allocated among states mainly on the basis of population. Since the petroleum producing states have relatively small populations, they receive little of the revenues derived from their own territories.

This problem is compounded by the fact that the predominantly Christian population that resides in the oil-producing regions is of different ethnic origin and speaks a different language than the predominantly Muslim population in the north, which controls the government. This fact makes external exit practically impossible for the people that reside in the oil-producing regions. Among the ethnic groups residing in the oil-producing regions are the Ogoni. In 1990 The Movement for the Survival of the Ogoni People (MOSOP) offered a bill of rights to the federal government which suggested that only a separate ethnically based state with control over the natural resources derived from their land would ensure their survival. The Nigerian central government perceived this as a threat to secede. MOSOP leader, while decrying this notion, still argued that a confederation would provide ethnic groups with higher autonomy and a greater chance of political justice.

4. Concluding remarks

The question addressed in the present study is under which circumstances the residents of a region that is being fiscally exploited would choose secession over exit. To answer the question we have put forth two explanations. The first explanation suggests that secession may be preferred if the level of productivity is significantly different between the two regions. The residents of the more productive region, which will always be exploited when the population is completely mobile, will refrain from moving to the subsidized region because such a move would result in a loss of income. Secession becomes their only viable strategy. The second explanation attributes secession to the

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7 Dibua, p.149  
8 Dibua, p.152
presence of significant ethnolinguistic differences among the populations that reside in different regions. The residents of the exploited region, which in this case can be either the poor or the rich, may refrain from moving to the subsidized region because the high psychological costs associated with residing in a region with ethnolinguistic characteristics different than their own outweigh the economic benefits. Secession becomes, again, the only viable strategy to avoid exploitation.

Our analysis suggests that ethnolinguistic differences matter because of their interaction with economic reasons, and not instead of them. We understand that this is a controversial position. Some may claim that by ignoring emotional factors we have tried to over-rationalize the nationalistic secessionist movements. Our response is that by no means do we wish to imply that such factors are not important. We do believe, however, that economic factors are responsible, at least partially, for the birth of secessionist movements that at first glance seem to be driven purely by nationalistic motives, as well as for the tribal and regional character that political parties have taken in many parts of the world, and especially in Africa. Having said that we can think of several extensions of our model that could help us gain further insights.

In the present work we have assumed that the ethnolinguistic characteristics of a region are independent of the ethnic composition of the population that resides in that region, that these characteristics are fixed and identical to the characteristics of the initial population. A reasonable extension would be to assume that the ethnolinguistic characteristics of a region also depend on the fraction of its residents that is made up by immigrants from other regions. A second extension would be to assume that although the residents of the poor region can earn a higher income in the rich region, that income is lower than the income that the initial residents of the rich region earn. This would be the case if the per capita income in the poor region is lower for reasons that have to do not only with the productivity of the region, but also with the skills of its population. Finally, we could give the residents of a region the ability to influence the income of migrants from other regions. One way to do that would be to allow the residents of a region to raise the psychological cost for the members of different ethnic groups that reside in their

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9 Dibua, p.154
region. Another way would be to allow for economic discrimination that would lower the income of members of different ethnic groups that reside in that region.

References


