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Nation-State Size, Ethnic Diversity and Economic Performance in the Advanced Capitalist Countries

NATALKA PATSIURKO, JOHN L. CAMPBELL & JOHN A. HALL

This paper examines the proposition that the economic performance of advanced capitalist countries depends on their size and ethnic composition. As such it blends insights from two important literatures in comparative political economy. One is exemplified by the work of Peter Katzenstein, who wrote the classic treatise on the relationship between nation-state size and economic performance. Another is illustrated by the work of Ernest Gellner, whose work suggested that economic performance depends on the ethnic composition of the nation-state. The argument is tested on pooled data from 30 advanced capitalist countries for the 1985 through 2007 period. Regression analysis confirms that ethnically homogenous countries tend to have stronger rates of economic growth during this period than ethnically heterogeneous countries but that neither the size of countries nor the interaction of size and ethnic composition have significant effects. This points to the need for further exploration of these issues either with data covering a longer time frame or historical case studies.

Keywords: small states, ethnicity, nationalism, fractionalisation, economic growth

Introduction

Research has shown that national economic performance depends upon the degree of ethnic diversity. More homogeneous countries tend to have higher economic growth rates than heterogeneous countries. The claim is explicit in the recent work of several prominent scholars who examine large numbers of developed and developing countries (for example, Alesina *et al.* 1999, 2003; Easterly and Levine 1997; Rodrick 1999). A number of reasons have been offered to explain

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the relationship between ethnic homogeneity and economic performance. Notably, some say that that ethnic divisions undermine the quality of political governance (Min *et al.* 2010), the ability to agree on sound economic policies (Rodrick 1999) and the willingness to provide public goods to everyone in society that would improve economic performance (Alesina *et al.* 1999). Much of this boils down to the idea that nominal ethnic divisions – measured, for instance, as the percentages of a population made up of different ethnic groups – tend to undermine social cohesion and the ability to make sacrifices for the common good, which in turn makes it difficult to respond flexibly to a changing external environment (Bjørnskof 2008; Campbell and Hall 2009).

Complicating matters immediately is the possibility that country size as well as ethnic diversity may affect social cohesion, self-sacrifice for the common good and therefore economic performance (Judt 2010, Chapter 2). Political economists have paid much attention to the recent socioeconomic success of small advanced capitalist countries (for example, Schwartz 1994, 2001; Hemerijck *et al.* 2000; Salvatore 2001). Some argue that it stems from the clever decisions and compromises made by political and business elites inside these countries (for example, Ó Riain 2004). Others argue that it is due to fortuitous circumstances over which elites have little control, such as shifting international demand for products from small countries (for example, Becker and Schwartz 2005). But the classic argument is that small countries prosper because they have long been vulnerable geopolitically and economically in ways that large countries have not. As a result, they have learned to adapt flexibly to the vulnerabilities they face, especially those associated with an increasingly global political economy (for example, Cameron 1978; Katzenstein 1984, 1985; Garrett 1998).

Of course, ethnic diversity and country size may be related to the extent that redrawing national boundaries has occasionally ended up separating different ethnic groups into smaller nation-states, as happened, for example, in Denmark in the mid-nineteenth century and in Czechoslovakia in the mid-1990s. Put differently, the ethnic diversity of a country may depend on its size. Danes, for example, have a strong sense of social cohesion in part because they recognise that they are vulnerable geopolitically and economically thanks to their country's small size. They remember that Denmark became a small country due to its repeated loss of territory in ill-fated military adventures. But they also have a strong sense of cohesion because most of them are from the same ethnic background (Campbell and Hall 2009, 2010). The point is that assessing the relationship between ethnic diversity and economic performance requires that we also take country size into consideration both theoretically and empirically. This is something that has not been done in the literature.

What interests us more specifically is whether ethnic diversity and country size affect economic performance among the advanced capitalist countries – that is, those countries belonging to the OECD. On the one hand, research on the relationship between country size and economic performance is based largely on qualitative case studies and subsets of west European countries – not the full set of OECD countries (for example, Katzenstein 1985; Hemerijck *et al.* 2000; Becker and Schwartz 2005). On the other hand, research on the relationship between ethnic diversity and economic performance is based typically on quantitative data sets

that include virtually all countries in the world, including those in Africa and Latin America, some of which have comparatively underdeveloped economies as well as states that are corrupt and unstable politically (for example, Easterly and Levine 1997; Alesina *et al.* 2003). But the advanced capitalist countries are a rather homogeneous subset by world standards. In part this is because nation-building took place long ago in many of them and at times involved violent means of expulsion, coercive assimilation, population transfer and genocide of certain ethnic groups in the middle of the twentieth century (Mazower 2000). They are also richer, more stable politically and run more according to principles of good democratic governance. The question, then, is whether ethnic diversity and country size matter for economic performance in the full subset of advanced capitalist democracies.

This paper addresses this question. In doing so we bring together two literatures: one on ethnic diversity, another on country size. To our knowledge, this is the first time that this has been done using quantitative data. Hence, this is an exploratory study intended to open up new territory for research into the effects of both ethnic composition and size on national economic performance. We begin with a discussion of why ethnic diversity and country size may be associated with national economic performance. Here we discuss the possibility that the effect of nominal ethnic diversity may be muted by the substantive inclusion of diverse ethnic groups into national politics. Next we develop a series of regression models to determine the extent to which these associations obtain for the OECD countries between 1985 and 2007. This was a period of rising economic globalisation with the sort of uncertainty and turbulence for which small, ethnically homogeneous countries ought presumably to be well suited. We find, first, as expected, that the more homogeneous the population is, the stronger the national rate of economic growth. Second, to our surprise, this relationship holds even after controlling for the degree to which different ethnic groups are included in national politics. In other words, nominal ethnic composition encompasses something more than just the degree to which ethnic divisions are politically salient; an argument that, as we will explain, contradicts recent scholarship on the subject. Third, to our surprise as well, all of these results hold regardless of the size of the country, measured in terms of land mass and population, which is not associated with economic growth. We conclude with further reflections on the relationships between ethnic diversity, country size and national economic performance.

Theoretical reflections on size and ethnic homogeneity

Among those political economists that have paid attention to the economic performance of small advanced capitalist democracies the classic argument remains that of Peter Katzenstein (1984, 1985). Katzenstein noted that small European states were likely to have relatively few natural resources, which made them dependent on the external world. Furthermore, a limited domestic market necessitated involvement in international trade so that economies of scale could be achieved. Moreover, the behaviour of small and large states differed in the world polity: the great could bend the rules of the international political-economic game to their own advantage whereas the puny had no option but to manoeuvre

within rules that they could hardly influence. In general, smallness translated into vulnerability vis-à-vis international political and economic forces. Paradoxically this very vulnerability lay behind the success of small countries. Shared fear created the capacity to limit internal conflict, to plot and plan, and to cope with international vulnerabilities by designing policies allowing small states to swim in the seas of larger international social forces. Crucially, small size allowed all interested parties to be gathered around a single table to work together in this manner. This led Katzenstein to appreciate social arrangements in small states that provided great capacities for learning and flexibility, specifically: (1) a centralised system of interest groups, (2) voluntary coordination of conflicting objectives through continuous political bargaining and (3) an ideology of social partnership expressed at the national level (Katzenstein 1985, Chapter 1).

Much has been written by comparative political economists about the first two points but not Katzenstein's suggestion that an ideology of social partnership is also important (for example, Smith 1992; Hicks and Kenworthy 1998; Hemerijck *et al.* 2000). Where does such an ideology of social partnership come from? What are its roots? How does it work? In all fairness, these questions were not central to Katzenstein's agenda. His basic point was that this ideology stemmed from collectively held perceptions of vulnerability associated with the nation-state's small scale. However, he also noted briefly that the degree to which nation-states were ethnically homogeneous affected how they reacted in response to such perceptions (Katzenstein 1985, Chapter 4). He did not pursue this second point in great detail but others have.

Ernest Gellner's work is particularly helpful here. Gellner's focus, in part because of his own experience of the collapse of the small nation-states of Central Europe during the interwar period, was on the vulnerability and economic development of nations (Gellner 1973, 1983; Hall 2010). He made two specific points in this regard that are pertinent for our purposes.

First, societies that are deeply divided ethnically often cannot cooperate and, as a result, cannot coordinate their political or economic activities because the different sides want different things. Similarly, the ability to endure sacrifice for the sake of the nation often results from the sort of strong national sentiment found among people with a common culture. All of this led Gellner to conclude that a common culture emanating from ethnic homogeneity was often a precondition for economic success (Gellner 1983, Chapters 3, 6). This is an argument that has resurfaced in various forms among those who see links today between nationalism, social capital, national economic prosperity and globalisation (for example, Helleiner and Pickel 2005; Putnam 2007; Bates 2008). The point is that ethnic homogeneity and the nationalism that often stems from it can provide the critical social foundation for the ideology of social partnership that Katzenstein suggested was crucial for small states.

Second, one way to develop the common culture needed for cooperation and sacrifice is to provide people with a common educational background that instils a strong sense of national identity. For Gellner the rigid status barriers – often based on ethnic differences – that prevented occupational mobility in pre-industrial times had to be reduced in order to expand opportunities for everyone and in turn help forge a common national identity, not to mention labour

market flexibility, upon which industrialisation and economic performance depended. Central to the removal of such barriers was the rise of mass education and the widespread cultivation of human capital among all ethnic groups. Arguably, a common educational background, elevated human capital and strong national identity can enhance the capacities for people to learn and respond flexibly to a wide variety of challenges, not just those in the labour market. Hence, for Gellner, common education can to a degree counterbalance problems otherwise associated with ethnic heterogeneity and improve economic performance accordingly (Gellner 1983, Chapter 3).

One important caveat is in order. As noted earlier, previous research that established the relationship between national ethnic composition and economic growth was based on nominal measures of the ethnic fractionalisation, such as the percentages of a population made up of different ethnic groups (for example, Alesina *et al.* 1999; Easterly and Levine 1997; Alesina *et al.* 2003; Patsiurko *et al.* 2012). Some scholars, however, argued convincingly that not every nominal ethnic difference leads to problems (for example, McGarry and O’Leary 1993; O’Leary 2001, 2003; Habyarimana *et al.* 2009; Min *et al.* 2010). Indeed, Gellner (1983, p. 7) made the same point by arguing that what really matters is not whether people have different cultural attributes per se but whether these attributes prevent some from enjoying the same rights as others. Nominal differences are not always perceived by citizens as being salient – that is, substantively meaningful – and thus may not have important effects on political or economic performance (Posner 2004, 2005). It is important, therefore, to determine whether the salience of ethnicity rather than nominal ethnicity per se is the better predictor of economic performance.

To review, two related questions require investigation for the advanced capitalist countries. To what degree are nominal and substantive ethnic diversity associated with national economic performance? To what degree is country size associated with economic performance?

Variables and data

We collected data for the 30 OECD countries for the period 1985 through 2007 in order to address these questions with a pooled time-series analysis. Our dependent variable was national economic performance. Following the convention in the literature on the relationship between ethnic diversity and economic performance, we measured performance in terms of the average GDP per capita growth rate in each country (for example, Alesina *et al.* 1999, 2003; Easterly and Levine 1997). We did this for two time periods: 1989–99 and 2001–7.¹ We selected these periods because they corresponded to the two business cycles most closely following the 1985 and 2000 years of our measure of nominal ethnic diversity.

Ethnic diversity

There are several indices of national ethnic diversity. For years the convention within the literature for measuring diversity was to use an ethno-linguistic fractionalisation index (ELF) based on data compiled by Soviet ethnographers in the early 1960s. Several scholars used ELF to demonstrate an inverse relationship

between ethnic diversity and economic development across countries (for example, Easterly and Levine 1997). But researchers have criticised this index for being outdated and unreliable (for example, O'Leary 2003; Posner 2004, 2005; Cederman and Girardin 2007; Fearon *et al.* 2007). In turn, other indexes have become available that improve things (for example, Alesina *et al.* 2003). But here again there are problems, such as inconsistency in terms of the years covered for different countries and the use of one-time measures of fractionalisation thus limiting what one can say about change over time (Fearon 2003; Posner 2004; Patsiurko *et al.* 2012).

We developed an index to avoid these problems that we use here as our measure of ethnic diversity.² This is a time-variant measure of ethnic diversity for the OECD countries using data for two points in time, 1985 and 2000. Using ethnic composition data we created an ethnic fractionalisation index ranging from 0 to 1 using the 'one minus the Hirschman-Herfindahl index' formula typically adopted in the literature. This formula estimates the probability that two randomly selected individuals in a country belong to different groups. Ethnic fractionalisation measured in this way is a common proxy for the ethnic composition of nation-states (for example, Alesina *et al.* 2003; Posner 2004, 2005). A score of 1 implies a highly heterogeneous country whereas a score of 0 refers to a perfectly homogeneous country. For example, an ethnic fractionalisation score of .0238 for Denmark means that the odds of two people selected randomly belonging to different ethnic groups is a little over 2%.

We appreciate that ethnic diversity is a tricky variable. All sorts of nominal differences can be passively present in a society. What may matter, however, is the degree to which inhabitants of a country perceive that their ethnic differences are salient politically. Hence, we also include in our analysis a time-sensitive measure of 'ethnic political exclusion,' developed by Wimmer and his colleagues (Wimmer *et al.* 2009, p. 325; Min *et al.* 2010). Ethnic political exclusion is the percentage of the total national population that is excluded from the executive branch of government due to ethnicity.³ To our knowledge, this is the only quantitative measure of ethnic political salience that is available for the OECD countries.

Size

To assess the claim that size can influence economic performance we measured country size in terms of population and arable land mass, both of which could contribute to small country vulnerability. Arguably, limited arable land mass may mean that countries lack much in the way of natural resources relative to large countries, which would make them more dependent on other countries for these resources. Small populations may also contribute to vulnerability insofar as military defence depends on a nation's ability to mobilise sufficient troops. Our measure of size, then, is the combined measure of land and population. We ranked each OECD country in terms of its population and its land mass among 138 countries in the world. Then for each country we averaged its two rankings. We used this average as a measure of size in our analysis. Ranks were necessary in order to bring the incomparable measures of population (number of people) and

land mass (square kilometres) into a single-number measure of size. The smaller the ranking was, the smaller the country.

Interaction effects

Recall that nominal ethnic diversity and size may be related to each other. Hence, we also examined an interaction term to assess whether the relationship between average size ranking and nominal ethnic fractionalisation was associated with economic growth.

Controls

Others have occasionally operationalised country size in terms of trade openness, that is, exports and imports as a percentage of GDP. They argue that smaller countries tend to be more open in terms of trade than large countries and therefore more vulnerable to international economic turbulence (for example, Cameron 1978; Katzenstein 1985). We are not convinced that this is an appropriate proxy for country size per se because, on the one hand, small countries may pursue policies that lead to greater openness in order to obtain the natural resources they need. They may also pursue trade openness in order to establish strong economic ties with larger countries and thus cultivate powerful friends who would come to their assistance in the event of geopolitical danger. But, on the other hand, large countries may do all of this too. Nevertheless, we include a measure of trade openness in our analyses as a control variable because it has received much attention in the literature and is often associated statistically with economic growth.

Much of the literature on the relationship between ethnic fractionalisation and growth is based on a large number of countries from around the world. It often incorporates numerous control variables into the regression models (for example, Alesina *et al.* 1999, 2003; Easterly and Levine 1997; Min *et al.* 2010). It is important to understand that we have a much smaller number of countries than these other studies, which significantly constrains our ability to add controls (Green 1991). So does the fact that the measure of ethnic fractionalisation that we use covers only two time periods. As a result, we only included controls that other scholars have found to be especially important in previous studies of ethnic fractionalisation and growth. We included controls for national income, measured in terms of the log of GDP per capita as well as the log of income squared to account for possible non-linear effects.⁴ We also included a measure of education, measured in terms of the log of average years of schooling per capita at the beginning of each time period.⁵ This is not only an important control for economic growth models but also for Gellner's theory insofar as he argued that education counterbalanced the deleterious effects of ethnic heterogeneity on economic performance. We employed a dummy variable for the post-communist countries because many of them achieved remarkably rapid growth in the 1990s after their communist regimes collapsed. Finally, we also included a dummy variable for the 1980s because an examination of the correlations among variables for both time periods suggested that the relationship between

ethnic fractionalisation and growth may have been stronger in the 1980s than in the 2000s.

Data for average GDP growth, arable land mass, population, trade openness and national income were gathered from the World Bank's (2009) World Development Indicators database. The education data come from Barro and Lee's (2001) educational attainment data base. Data for ethnic fractionalisation are from Patsiurko *et al.* (2012) and data for political exclusion are from Min *et al.* (2010). With the exception of average GDP growth rates, all data were collected for years as close to 1985 and 2000 as possible.

Analysis and results

To explore the relationship between ethnic fractionalisation and economic growth we began by regressing average annual GDP growth rates on ethnic fractionalisation and generated scatter plots of countries around the regression lines. We did the same for nation-state size and growth rates. Results appear in Figures 1–4. Ethnic fractionalisation is inversely related to growth for individual countries. Similarly, nation-state size is inversely related to growth for individual countries.

Figure 1 shows that during the 1989–99 years Ireland was an extreme case that did not fit the prediction of growth as related to ethnic fractionalisation.⁶ Because

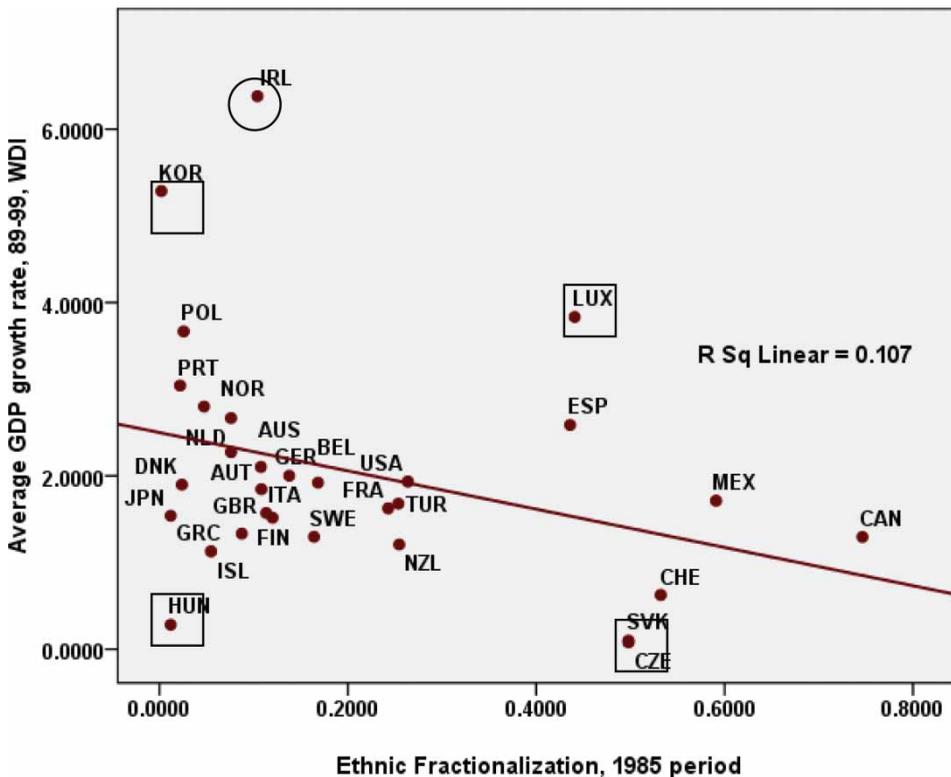


FIGURE 1. Ethnic fractionalization and average GDP growth, 1989–99

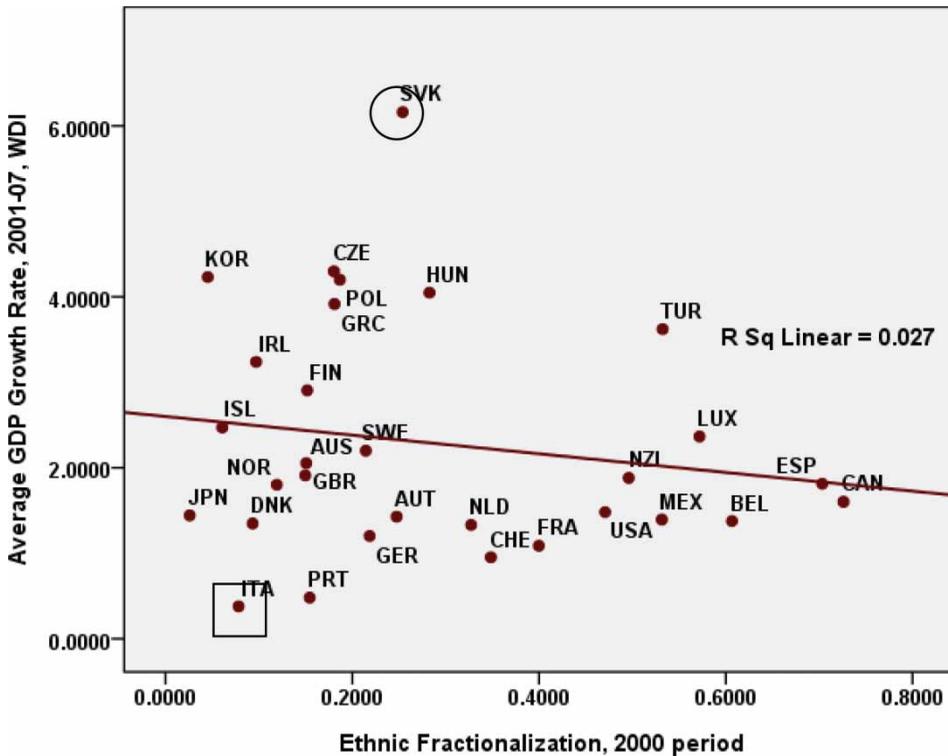


FIGURE 2. Ethnic fractionalization and average GDP growth, 2001–7

ethnic fractionalisation in Ireland was low its growth rate should have been high, but only on the order of 2.23% per year. Instead, Ireland's growth rate was 6.39% per year. Other outliers, although not statistically significant, were South Korea and Luxembourg, which out-performed expectations, and Hungary and the Czech Republic, which under-performed expectations. Figure 2 repeats the exercise for 2001 through 2007. Slovakia was the only statistically significant outlier – GDP was predicted to increase by 2% per year but reached more than 6% per year.⁷

Note that the position of countries around the regression lines shifted, sometimes dramatically. For instance, Ireland, South Korea and Luxembourg all moved much closer to the regression line from the first to the second periods and were no longer outliers. Especially interesting is the fact that some countries moved across the line by considerable amounts. Hungary, the Czech Republic and Slovakia moved from notable under-performers to notable over-performers; a fact that surely reflects their change from communist to capitalist economic systems.

Figures 3 and 4 show the relationship between country size and average growth rates. For the 1989–91 years, Ireland had growth rates much stronger than its size would predict. In the 2001–7 years, Slovakia was the outlier growing much beyond expectations.⁸ Again there was considerable shifting around the regression lines with Slovakia being the most obvious case moving from an under-performer to an over-performer.

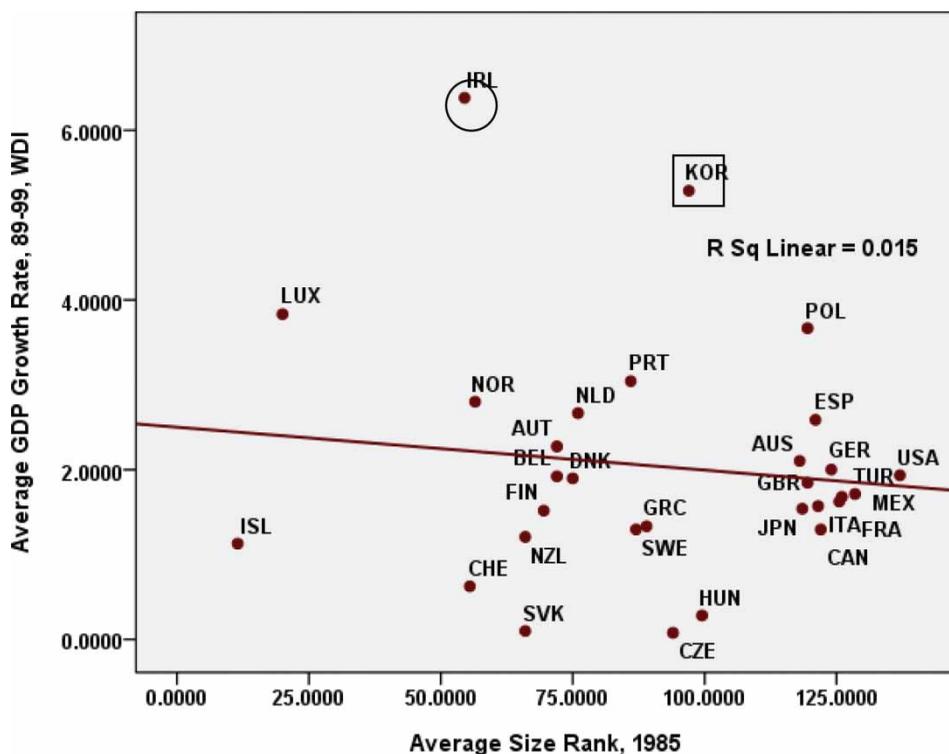


FIGURE 3. Size and average GDP growth, 1989–99

To pursue things further we turned to multiple regression analysis. We used the Seemingly Unrelated Regression (SUR) technique with no controls as provided by Stata statistical software to analyse the data. SUR is appropriate for analyzing pooled data like ours in an extended model where a single regression model uses a number of linear equations in which the equation errors are likely correlated (Zellner 1962). Results are presented in Table 1.

To begin with, in Model 1 we examined the effects of only the measure of ethnic fractionalisation and the controls for trade openness, the 1980s, post-communist countries, income and education. In Model 1, ethnic fractionalisation was significantly associated with economic growth. The sign of the coefficient was in the expected direction indicating that with controls in place an increase of ethnic fractionalisation from 0 to 1 resulted in a 2.5% decline of average GDP growth, a result that is consistent with the literature on the influence of ethnic fractionalisation on growth. The coefficients for trade openness, post-communist country and education were also significant statistically and in the predicted directions. The more economically open and educated a country was, the stronger its growth rate tended to be. And post-communist countries tended to have stronger growth rates than others. Notably, although the coefficient for trade openness was positive as expected it was comparatively small.

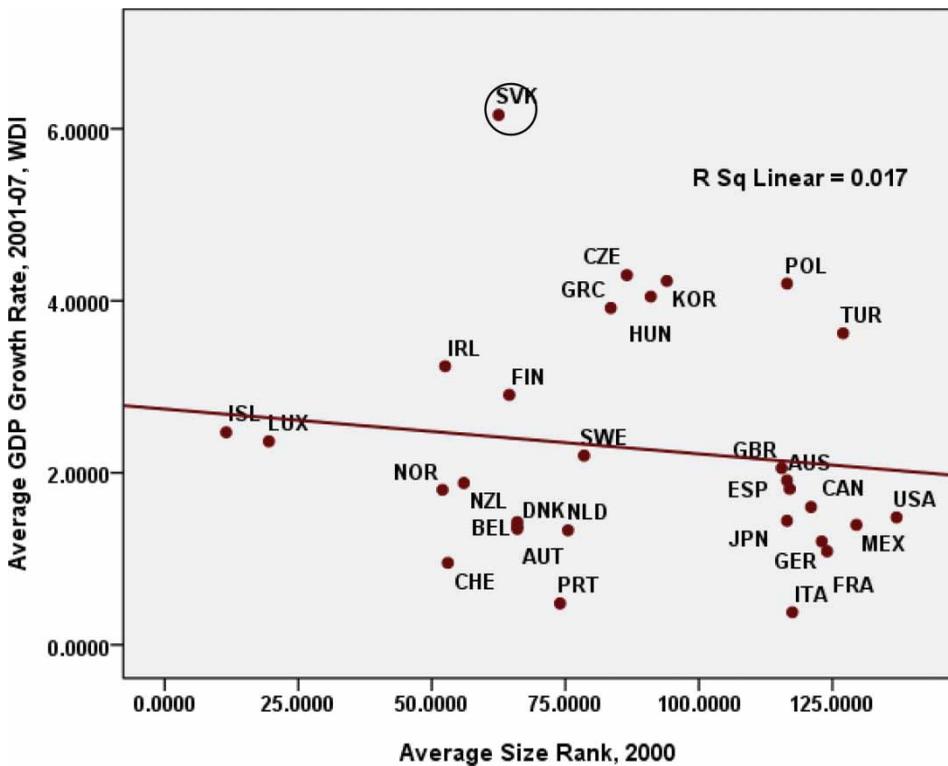


FIGURE 4. Size and average GDP growth, 2001–7

In Model 2 we substituted size for ethnic fractionalisation. Size was not significantly associated with growth. Trade openness, the dummy variable for post-communism and education remained significant, although the effects were small, particularly for trade openness. Model 3 examines ethnic fractionalisation and size together. Ethnic fractionalisation remains significant while size remains insignificant.

Model 4 adds a variable for the interaction between size and ethnic fractionalisation to the previous analysis. The results are essentially the same as they were in Model 3. The interaction term is not statistically significant. Nor is the relationship between size and growth. But the association between ethnic fractionalisation and economic growth remained statistically significant.

Model 5 adds the ethnic political exclusion variable to those in Model 4. Note that the number of countries in Model 5 is smaller than in the previous models because these data do not provide measures of exclusion for Luxembourg or Iceland. Hence, we had to drop these countries from this model. The variable was not significant statistically in our model. Yet nominal ethnic fractionalisation remained significant as in all the previous models. This was surprising insofar as other researchers have argued that what matters for political and economic outcomes is not the nominal amount of ethnic diversity in a country but whether ethnic differences are politically salient. If this had been the case, then we

TABLE 1. Ethnic fractionalization, size and economic growth

	Model 1	Model 2	Model 3	Model 4	Model 5
Ethnic fractionalization	-.0252*** (-3.74)		-.0262*** (-3.75)	-.0617** (-2.84)	-.0812** (-2.98)
Size: average rank of population and land		-.00003 (-0.52)	.00003 (0.52)	-.00003 (-0.54)	-.0001 (-1.10)
Size*Ethnic fractionalization				0.0003 (1.72)	0.0005 (1.78)
Ethnic political exclusion					.0361 (1.70)
Trade openness	.0001*** (4.33)	.0001* (2.29)	.0001*** (3.61)	.0002*** (4.08)	.0001* (2.57)
Dummy for the 1980s	-.0046 (-1.61)	-.0031 (-0.97)	-.0044 (-1.52)	-.0034 (-1.18)	-.0048 (-1.62)
Post-communist countries	-.0224** (-3.06)	-.0176* (-2.21)	-.0226** (-3.09)	-.0224** (-3.14)	-.0206** (-2.86)
Log of income	-.0406 (-0.32)	-.0011 (-.02)	-.0457 (-0.36)	-.0869 (-0.68)	-.0068 (-0.05)
Log of income squared	-.0002 (-0.01)	-.0044 (-.26)	.0004 (0.03)	0.0056 (0.36)	-.0044 (-0.26)
Log of schooling	.0558** (2.86)	.0473* (2.21)	.0562** (2.89)	0.0598** (3.13)	0.0652*** (3.42)
R^2	0.4334	0.3042	0.4360	0.4624	0.5153
N	60	60	60	60	56

*** $p \leq 0.001$; ** $p \leq 0.005$; * $p \leq 0.05$

would have expected that the addition of the ethnic political exclusion variable to the model would have muted if not fully nullified the significant association between our nominal ethnic fractionalisation variable and economic growth. Indeed, the addition of the ethnic political exclusion variable had no appreciable effect on the other variables in the model. Ethnic fractionalisation, trade openness, post-communism and education all remained statistically significant and with the same coefficient signs as in the previous models. Notably, of all the models we tried, Model 5 best fits the data ($R^2 = 0.52$).

In models not reported here we ran the analyses again but substituting actual land mass for our average size rank variable and then substituting actual population size for our average size rank variable. Neither of these new size variables was statistically significant. And their presence did not appreciably alter any of the results that we reported in Table 1. Similarly, when we dropped the size and fractionalisation variables and included only the size-fractionalisation interaction term the interaction was statistically insignificant and the rest of the results remained essentially the same as those reported in Table 1.

Overall, then, nominal ethnic fractionalisation was negatively and significantly associated with economic growth even when controlling for ethnic political exclusion. That is, countries that were more diverse ethnically had lower growth rates on average than countries that were less diverse ethnically. Ethnic political

exclusion was not statistically significant. Moreover, neither size nor the interaction between size and fractionalisation had a statistically significant relationship with growth. Trade openness, being a post-communist country and being a country with a relatively well educated population were also positively and significantly related to economic growth. These results were consistent across all models. The results suggest that ethnic diversity but not country size as we have operationalised it have important effects on national economic growth in the advanced capitalist democracies during the late twentieth century.

The fact that trade openness was significantly associated with economic growth requires an additional comment. Recall that some researchers suggest that trade openness is a proxy for country size insofar as smaller countries are more dependent on trade than larger ones and therefore more vulnerable to international economic pressures (for example, Katzenstein 1985). Trade openness is significantly correlated with our rankings-based size variable ($-.645, p < .001$) as well as arable land mass ($-.348, p < .005$) and population ($-.465, p < .001$). This suggests that at least for the OECD countries during the late twentieth century trade openness may in fact be a reasonable proxy for country size insofar as countries with fewer people and less land tend to have more open economies. In separate analyses we found that rankings-based size was significantly associated with growth as predicted when trade openness was omitted from the model. However, this association turned insignificant when trade openness was added. Furthermore, regardless of whether trade openness was included in the model, neither population nor arable land mass was significantly associated with economic growth. The point is that the effect of country size on economic growth may operate to an extent through trade openness even if the effect is small. We will return to this issue later.

Discussion

Ours is an exploratory study designed to examine the associations between ethnic composition, country size and national economic performance. The most important finding in our analysis is simple: ethnic diversity matters for economic growth in the contemporary world in the relatively homogeneous, largely liberal, rich and advanced OECD countries. Previous qualitative work showed that in a few small culturally homogeneous OECD countries a shared sense of destiny created the social cohesion that allowed for co-operation, co-ordination and sacrifice for the common good (Campbell and Hall 2010). We suspect the same to be true more generally – and aim to find out through further case studies. We do not mean to imply that there is only one best route to economic success or that being small and culturally homogeneous is the only route to success. Indeed, there is much evidence to suggest that there is no one best route (Hall and Soskice 2001). Rather our claim is that, all else being equal, small homogeneous countries tend to have advantages that enable them to swim successfully in today's sea of turbulent international capitalism.

It is worth mentioning in this regard the Swiss case since it might seem to contradict our argument. After all, many see Switzerland as a small and economically successful country but one that is very diverse ethnically. However, the best

analysis now available suggests that this is an oversimplification of the situation. Switzerland is best classified as a multi-lingual and multi-religious but mono-national nation-state in which a shared national identity is far more important than its ethnic diversities; which were very rarely politicised thanks to the historical presence of institutions, both political and civil, that transcended ethnic cages (Steinberg 1996; Wimmer 2011).

The effect of education in our models is worth further discussion. Gellner argued that education provided two benefits to society. First, it can reduce status barriers that otherwise inhibit occupational mobility, labour market flexibility and thus economic performance. Second, education can cultivate a common culture, a sense of national identity and solidarity, which in the views of both Gellner and Katzenstein is another ingredient for economic success. Our results are consistent with these arguments.⁹ Of course, it may be that what is involved as well is simply an overall improvement in human capital, which can also help improve economic performance. Sorting out the degree to which each of these mechanisms were responsible for the results in our data is an important task that requires further research.

We were surprised by two results of the analysis. First, the ethnic political exclusion variable did not prove to be a good predictor of growth. It may be possible to explain why this is so. To begin with, researchers who have found this to be significant in other analyses may suffer from what might loosely be called the 'African problem.' That is, they include in their analyses developing as well as developed countries, many of which, notably several in Africa, are highly heterogeneous and very far removed from norms and institutions of liberal democratic governance. Accordingly, there is more opportunity for ethnicity to be politically and economically salient (for example, Posner 2005; Bates 2008). Second, there may be some limitations to the ethnic political exclusion data we have used insofar as it only measures ethnic groups' relations with the executive branch of government. It says little about representation in political parties or legislatures per se and nothing about unions, civic associations and citizenship rights more broadly (Soysal 1994). It may very well be the case that the reason why the nominal ethnic fractionalisation variable outperforms the more substantive ethnic political exclusion variable in our analysis is that it captures some of these additional mechanisms.¹⁰

The second surprise was that size as we have measured it in terms of population and land mass had no significant effect in our analysis. It may be possible, again, to suggest why this is so. It is important to recognise that the survival strategies of small nation-states vary according to the condition of the world political economy within which they have to live. The widespread protectionism of the 1930s was disastrous for these countries, which have ever since argued for free trade regimes and thus economic openness. In contrast, the late twentieth and early twenty-first century world is rather peaceful in the OECD. Accordingly, land mass is not crucial when an increasingly global economy allows access to raw materials and markets through trade. Similarly, a large population is not crucial when the global economy permits outsourcing and for workers to move rather easily into and out of countries as needed, such as seen vividly, for instance, in Switzerland and Ireland.

Recall that our results show that trade is important for securing growth. As a result, those who have argued that trade openness is a good proxy for nation-state size would presumably conclude that size does matter for growth. But we would urge caution. First, the statistical effect of trade openness was quite small. Second, even if trade openness is correlated with size, it cannot be reduced to it. As we have said, large countries as well as small ones may pursue policies that facilitate free trade. Further, we wonder whether the effect of size on growth might manifest in more indirect ways that transpire over longer periods of time than we have analysed here. This analysis has concerned only the very recent past, the period between 1985 and 2007. It would be wonderful if we could extend our analysis backward for earlier historical periods. But this is not possible. The data on ethnic composition that we have used do not go back far enough to allow times-series analysis for longer periods of time. Moreover, cross-national data on ethnic composition are very much open to question for periods prior to 1945. Equally, the further back one goes, the more questionable becomes the accuracy of GDP and other data. This is a pity, to put it mildly, because long historical processes are at work in the creation of powerful shared national identities. Denmark, for example, underwent ethnic homogenisation and national identity formation processes that began at least as far back as the mid-nineteenth century and that had significant impacts on her economic performance ever since (Campbell and Hall 2010).

And from this follows the crucial consideration. The model presented in this paper examines the direct effects of size and ethnic diversity on economic growth. But it does not look at the effects of institutional cooperation and consensus on growth. This would involve additional research of two possible types. First, it would expand the number of observations in the data, which would then permit the inclusion of additional variables in the quantitative models. As we have explained, this would require augmenting the current data on ethnic composition that we have used in order to cover a longer time series than is currently available. Second, the qualitative analysis of key cases could reveal how size and ethnic diversity affect how the genesis, character, maintenance and capacity to change institutions influences national economic performance.

Finally, we insist that to argue that there are benefits of homogeneity is not to recommend policies that it be forcibly created in countries marked by great diversity. To begin with, policies that allow for successful assimilation can and have worked, and are morally preferable. Second, partitions, population transfers, cleansings and killings are foul, and should be rejected. Furthermore, they can leave behind legacies of hatred that can impede societal success. We can further note that there is no guarantee that homogeneity automatically creates solidarity. In Greece, for instance, memories of civil war still matter to divide an otherwise relatively homogeneous population. Moreover, solidarity may be created by conditions other than ethnic homogeneity, such as war or other national crises. Nonetheless, ethnic homogeneity makes it at least likely that solidarity will ultimately reign, as became true, for example, in the case of Finland where economic success followed eventually from the unity created once civil war was over. Again, qualitative case studies are necessary to establish causation.

Notes

1. Growth rates are missing in 1989 and 1990 for Poland and the Czech Republic. Therefore, their averages are for the years 1991–1999 only.
2. See Patsiurko *et al.* (2012) for our ethnic fractionalisation measures – as well as measures for linguistic and religious fractionalisation – for the OECD countries. We also provide there a detailed discussion of how we developed the index of ethnic fractionalisation and the data upon which it is based.
3. Their data provide measures of political exclusion for 1985 and 2000 for all the OECD countries except Luxembourg and Iceland. They provide a detailed explanation of the extremely elaborate and time intensive process by which they measured ethnic political exclusion.
4. We use the GDP per capita in constant 2000 US dollars.
5. More specifically, following Easterly and Levine (1997), it is the log of $(1 + \text{average years of education})$ at the beginning of each period, 1985 and 2000.
6. Ireland's standardised regression residual is greater than 3.
7. Slovakia's standardised regression residual is greater than 2.5.
8. The standardised residuals for both Ireland and Slovakia were larger than 2.5.
9. We recognise that the mechanisms by which education affects political cohesion may be different in non-liberal political regimes, especially outside the OECD (for example, Lange 2012).
10. One might note further that the measurement of exclusion does not take account of changes in the size of ethnic groups over time.

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References

- Alesina, A., Baqir, R. and Easterly, W. (1999), 'Public Goods and Ethnic Divisions', *Quarterly Journal of Economics*, 114 (4), pp. 1243–84.
- Alesina, A. *et al.* (2003), 'Fractionalization', *Journal of Economic Growth*, 8, pp. 155–94.
- Barro, R.J. and Lee, J.-W. (2001), 'International Data on Educational Attainment: Updates and Implications', *Oxford Economic Papers*, 53, pp. 541–63. Available from: <http://www.cid.harvard.edu/ciddata/ciddata.html>
- Bates, R. (2008), *When Things Fell Apart: State Failure in Late-Century Africa* (New York: Cambridge University Press).
- Becker, U. and Schwartz, H. (eds) (2005), *Employment 'Miracles': A Critical Comparison of the Dutch, Scandinavian, Swiss, Australian and Irish Cases versus Germany and the US* (Amsterdam: University of Amsterdam Press).

- Bjørnskov, C. (2008), 'Social Trust and Fractionalization: A Possible Reinterpretation', *European Sociological Review*, 24, pp. 271–83.
- Cameron, D. (1978), 'The Expansion of the Public Economy: A Comparative Analysis', *American Political Science Review*, 72, pp. 1243–61.
- Campbell, J.L. and Hall, J.A. (2009), 'National Identity and the Political Economy of Small States', *Review of International Political Economy*, 16 (4), pp. 1–26.
- Campbell, J.L. and Hall, J.A. (2010), 'Defending the Gellnerian Premise: Denmark in Historical and Comparative Context', *Nations and Nationalism*, 16 (1), pp. 89–107.
- Cederman, L.-E. and Girardin, L. (2007), 'Beyond Fractionalization: Mapping Ethnicity onto Nationalist Insurgencies', *American Political Science Review*, 101, pp. 173–85.
- Easterly, W. and Levine, R. (1997), 'Africa's Growth Tragedy: Politics and Ethnic Divisions', *Quarterly Journal of Economics*, 112, pp. 1203–50.
- Fearon, J.D. (2003), 'Ethnic and Cultural Diversity by Country', *Journal of Economic Growth*, 8, pp. 195–222.
- Fearon, J.D., Kasara, K. and Laitin, D.D. (2007), 'Ethnic Minority Rule and Civil War Onset', *American Political Science Review*, 101, pp. 187–93.
- Garrett, G. (1998), *Partisan Politics in the Global Economy* (New York: Cambridge University Press).
- Gellner, E.A. (1973), 'Scale and Nation', *Philosophy of the Social Sciences*, 3, pp. 1–17.
- Gellner, E.A. (1983), *Nations and Nationalism* (Oxford: Blackwell).
- Green, S. (1991), 'How Many Subjects Does it Take to Do a Regression Analysis?', *Multivariate Behavioral Research*, 26 (3), pp. 499–510.
- Habyarimana, J. et al. (2009), *Coethnicity: Diversity and Dilemmas of Collective Action* (New York: Russell Sage).
- Hall, J.A. (2010), *Ernest Gellner: An Intellectual Biography* (London and New York: Verso).
- Hall, P.A. and Soskice, D. (eds) (2001), *Varieties of Capitalism* (New York: Oxford University Press).
- Helleiner, E. and Pickel, A. (eds) (2005), *Economic Nationalism in a Globalizing World* (Ithaca: Cornell University Press).
- Hemerijck, A., Unger, B. and Visser, J. (2000), 'How Small Countries Negotiate Change', in F. Scharpf and V. Schmidt (eds), *Welfare and Work in the Open Economy*, Vol. 2 (New York: Oxford University Press), pp. 175–263.
- Hicks, A. and Kenworthy, L. (1998), 'Cooperation and Political Economic Performance in Affluent Democratic Capitalism', *American Sociological Review*, 103, pp. 1631–72.
- Judt, T. (2010), *Ill Fares the Land* (New York: Penguin).
- Katzenstein, P.J. (1984), *Corporatism and Change* (Ithaca: Cornell University Press).
- Katzenstein, P.J. (1985), *Small States in World Markets* (Ithaca: Cornell University Press).
- Lange, M. (2012), *Educations for Ethnic Violence: Identity, Educational Bubbles and Resource Mobilization* (New York: Cambridge University Press).
- Mazower, M. (2000), *Dark Continent: Europe's Twentieth Century* (New York: Vintage).
- McGarry, J. and O'Leary, B. (eds) (1993), *The Politics of Ethnic Conflict Regulation* (London: Routledge).
- Min, B., Cederman, L.-E. and Wimmer, A. (2010), 'Ethnic Exclusion, Economic Growth, and Civil War', unpublished manuscript, Department of Sociology, University of California–Los Angeles.
- O'Leary, B. (2001), 'The Elements of Right-Sizing and Right-Peopling the State', in B. O'Leary, I. Lustick and T. Callaghy (eds), *Right-Sizing the State* (New York: Oxford University Press), pp. 15–73.
- O'Leary, B. (2003), 'What States Can Do with Nations: An Iron Law of Nationalism and Federation?', in T.V. Paul, G.J. Ikenberry and J.A. Hal (eds), *The Nation-State in Question* (Princeton: Princeton University Press), pp. 51–78.
- Ó Riain, S. (2004), *The Politics of High-Tech Growth* (New York: Cambridge University Press).
- Patsirko, N., Campbell, J.L. and Hall, J.A. (2012), 'Measuring Cultural Diversity: Ethnic, Linguistic and Religious Fractionalization in the OECD', *Ethnic and Racial Studies*, 35 (2), pp. 195–217.
- Posner, D.N. (2004), 'Measuring Ethnic Fractionalization in Africa', *American Journal of Political Science*, 48, pp. 849–63.
- Posner, D.N. (2005), *Institutions and Ethnic Politics in Africa* (New York: Cambridge University Press).
- Putnam, R. (2007), 'E Pluribus Unum: Diversity and Community in the Twenty-first Century – The 2006 Johan Skytte Prize', *Scandinavian Political Studies*, 30 (2), pp. 137–74.
- Rodrick, D. (1999), 'Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses', *Journal of Economic Growth*, 4 (4), pp. 385–412.

- Salvatore, D. (2001), 'The Economic Performance of Small versus Large Nations', in D. Salvatore, M. Svetlicic and J.P. Damijan (eds), *Small Countries in a Global Economy* (New York: Palgrave), pp. 71–90.
- Schwartz, H. (1994), 'Small States in Big Trouble: State Reorganization in Australia, Denmark, New Zealand, and Sweden in the 1980s', *World Politics*, 46, pp. 527–55.
- Schwartz, H. (2001), 'The Danish "Miracle"? Luck, Pluck, or Stuck?' *Comparative Political Studies*, 3 (2), pp. 131–55.
- Smith, M. (1992), *Power, Norms, and Inflation: A Skeptical Treatment* (New York: Aldine de Gruyter).
- Soysal, Y. (1994), *Limits of Citizenship* (Chicago: University of Chicago Press).
- Steinberg, J. (1996), *Why Switzerland?* (New York: Cambridge University Press).
- Wimmer, A. (2011), 'A Swiss Anomaly? A Relational Account of National Boundary Making', *Nations and Nationalism*, 17 (4), pp. 718–37.
- Wimmer, A., Cederman, L.-E. and Min, B. (2009), 'Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set', *American Sociological Review*, 74, pp. 316–37.
- World Bank (2009), 'World Development Indicators', Available from: <http://web.worldbank.org/>
- Zellner, A. (1962), 'An Efficient Method of Estimating Seemingly Unrelated Regression Equations and Tests for Aggregation Bias', *Journal of the American Statistical Association*, 57, pp. 348–68.