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Vassilis Monastiriotis and Ivan Zilic

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Contents

The economic effects of political disintegration: Lessons from Serbia and Montenegro

Vassilis Monastiriotis* Ivan Zilic†

Abstract

Is there an economic premium from state independence? We shed light on this question by analysing the unique historical case of the peaceful separation of Serbia and Montenegro in 2006—the last fully recognised internationally state-disintegration on European soil. Using the synthetic control approach, we find that independence for the seceding country (Montenegro) had a sizeable but transitory positive effect, boosting GDP per capita in the period immediately following independence, but with gains slowly evaporating in the longer period—which we attribute to increased vulnerability of the newly independent state to fluctuations in the international economic environment. In contrast, for Serbia, we find no evidence of an independence dividend. While these results are context-specific, the resemblance of Serbia and Montenegro's case with the contemporaneous independence movements in Europe, namely in the realm of policy autonomy pre-separation, provide insights on possible economic outcomes of secessions on the national and supra-national level in Europe.

Keywords: secession; independence; political disintegration; synthetic control; Western Balkans.

JEL classification: F15, O52, N14.

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I. Introduction

What is the economic dividend of state independence? Despite the recent surge in secessionist and pro-independence movements, both at the national (Scotland, Catalonia) and the supra-national levels (Brexit), the evidence concerning the economic impact of *political disintegration* (state independence and political autonomy) in the academic literature is surprisingly limited. With regard to Brexit, a large number of studies and policy analyses have recently sought to measure, and anticipate, the economic consequences of various exit scenarios (see, inter alia, O'Reilly et al. (2016) and Sampson (2017))—but unavoidably they rely heavily on *a priory* assumptions about future developments in key policy and behavioural parameters or on structural models calibrated on past episodes of *integration*. Other cases of secession or new state formation—especially in relation to the dissolution of Yugoslavia and the USSR—are also relatively under-studied, perhaps partly because of the complexity of the cases, complicated as they were by ethnic tensions and military hostilities.[1]

In public finance theory and the literature on fiscal federalism, state independence—as an extreme form of fiscal decentralization—is expected to have positive welfare effects. This is for a number of reasons. Independence allows the accommodation of heterogeneous preferences, resolving information and coordination problems that may exist at the central (federal) level and providing for a better match between local conditions and local policies (Salmon, 1987; Rodden, 2004; Erk and Koning, 2010; Loeper, 2011). It also enhances local voice and accountability, raising policy effectiveness through yardstick competition (Brennan et al., 1980; Besley and Smart, 2002; Belleflamme and Hindriks, 2005; Faguet, 2014); while it may have additional beneficial effects by raising confidence and creating new economic opportunities in the newly formed state entities (Brueckner, 2006; Rodríguez-Pose and Sandall, 2008; Blöchliger and Égert, 2013). Inversely, in international economics it is economic and *political integration* which creates positive welfare effects, as it eliminates barriers to trade and to other economic flows (FDI, migration) and removes distortionary taxes and non-tariff barriers (e.g., via national standards).

In practice, of course, the materialization of any such effects is heavily conditioned on the capacities of the 'devolved' administrations and the quality of government or of local institutions

[1] The literature on the dissolution of Yugoslavia is mainly concerned with the economic drivers of secessions (Bookman (1992); Bartlett (1996)) rather than with their effects. An exception to this is the study by Rodríguez-Pose and Stermšek (2015), who examine econometrically the economic performance of the successor states of Yugoslavia's but without a counterfactual frame of analysis concluding that peaceful separations bear no economic dividends while violent separations carry sizeable economic penalties.

more generally—as well as on the appropriateness of policies pursued by the newly-independent authorities.[2] The positive effects of independence can further be annuled by the political instability and economic uncertainty which often accompanies historical episodes of new state formation Rodríguez-Pose and Stermšek (2015).

In this paper we exploit the unique historical case of the separation between Serbia and Montenegro—the last fully recognised internationally state disintegration on European soil—to provide evidence on the causal effects of political disintegration (state independence). This case is particularly suited to helping us understand the economic effects of independence for contemporary cases in the political economy of Europe. First, similar to the cases of Catalonia and Scotland (and, arguably, the case of Britain within the EU), at the time of its declaration of independence in 2006 Montenegro had higher levels of development and significant natural resource advantages (be it, mainly in tourism) compared to its counterpart within the so-called State Union of Serbia and Montenegro. Second, and again similar to contemporary cases and unlike previous historical episodes of secession (e.g., Abkhazia and South Osetia, Kosovo, Crimea, etc), Montenegro's secession from the State Union was remarkably peaceful and uneventful. This makes the case particularly suited for studying the economic effects of independence without the distortive effects of armed conflicts and political upheavals usually associated with unilateral declarations of independence. Third, and more importantly, Montenegro had already, well before its declaration of independence, significant policy autonomy in a large number of policy areas, including crucially in privatisation (and thus also in FDI-attraction policies) and monetary policy (including a de facto separate exchange rate regime, owing to its unilateral euroisation since 2002) (Noutcheva and Huysseune, 2004). This ensured an unprecedented degree of policy continuity since independence.[3] This in turn allows the estimation of the economic effects of independence unsoiled by influences that may have to do with (sometimes paradigmatic) policy shifts or changes in administrative capacity and the quality of government. We note that this makes the case of the Montenegro-Serbia separation directly comparable to the contemporary cases of Scotland, Catalonia and even Britain, despite the obvious differences in the historical and geographical context of these cases.

[2] The role of institutional quality for the delivery of good policies is well understood in the political science literature (see, inter alia, Lee and Whitford (2009); Rothstein (2011) as well as in literatures looking at particular episodes of policy-change such as the process of EU accession (Börzel and Hüllen, 2011) or the fiscal adjustment programmes during the Eurozone crisis (Monastiriotis, 2014). Although the literature is more mute with regard to the issue of policy effectiveness in the process of new state formation, it is rather unproblematic to argue that in practice independence may lead to a negative capacity shock (as well as new rent-seeking opportunities) which may lessen, or even reverse, the positive effects from independence discussed in the literature.

[3] Indeed, the Democratic Party of Montenegro, led by six-times Prime Minister and former President of Montenegro Mr Milo Djukanovic, has been in power uninterruptedly since the fall of communism.

To analyse the economic effects of independence we apply a synthetic control approach, matching pre-independence outcomes in Serbia and in Montenegro (separately) with those in a set of comparable 'donor' countries and producing estimates of the post-independence divergence between actual and predicted ('synthetic') outcomes in the two countries. We find that independence produced a substantial boost in Montenegrin GDP; which was however shortlived: in our core results, the positive income effect of Montenegrin independence seems to had been fully eliminated by 2014, partly as a result of the fall of FDI inflows since the eruption of the Global Financial Crisis. In contrast, for Serbia, we find no evidence of an independence dividend. If anything, Serbian GDP seems to have grown more slowly than that of 'synthetic' Serbia (in the non-separation scenario), although this effect does not seem to carry much statistical confidence. This suggests that independence has asymmetric effects on the successor entities, plausibly indicating a psychological 'confidence' effect, whereby the entity seen as 'leaving' is able to draw an economic advantage vis-a-vis the one which is considered as 'being left'.[4]

We explain the synthetic control method and our overall empirical approach in section III, after a brief overview of the historical context of the Serbia-Montenegro union and separation. Section IV presents our empirical results, separately for Serbia and Montenegro, as well as a number of robustness checks and additional explorations. Finally, section V concludes with a discussion of the implications of our findings for prospective cases of secession in Europe.

II. Institutional setting and independence of Montenegro

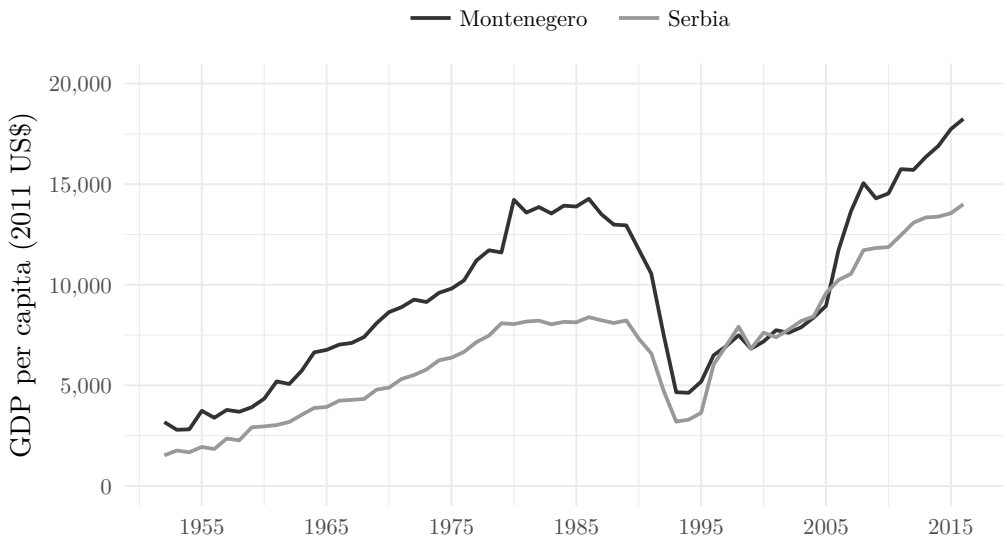
While both Serbia and Montenegro gained their state independence at the Congress of Berlin in 1878, the two countries had—despite their geographical proximity—very different historical paths, as Serbia was under Ottoman rule for five centuries while the Province of Montenegro remained free of such formal dependencies. In fact, Serbia and Montenegro were not bordering unit 1912, when the Balkan Wars resulted in an expansion of both states, absorbing the region of Sandzak which was separating them. After the First World War, the Kingdom of Serbs, Croats and Slovenes was created which tied Serbia and Montenegro in a single political entity—a connection that would last until the declaration of independence by Montenegro in 2006. After the Second World War, the Socialistic Federal Republic of Yugoslavia (SFRY) was created, a federation of six republics (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia)

[4]This is consistent with evidence found in the subjective well-being literature concerning the psychological effects of divorce in married couples (see, inter alia, Gardner and Oswald (2006)).

and two autonomous provinces within Serbia (Kosovo and Vojvodina), recognizing both the Serbs and the Montenegrins, among others, as nations. In the 1990s, as Yugoslavia broke-up amid armed conflicts and war, Slovenia, Croatia, Bosnia and Herzegovina and Macedonia declared independence (in 1992), while Montenegro opted to stay with the union thus creating the Federal Republic of Yugoslavia as the successor, although not intentionally recognized, of SFRY. [5]

While the tension between Serbia and Montenegro was not as strong as with the other nations inside the SFRY—possibly due to the common religion which has been stumbling stone for relationships in Yugoslavia (Hockenos and Winterhagen, 2007)—the following years saw Montenegro frustrated with the sate of affairs with the new political entity. Problems with the international relations and economic sanctions due to the Milosevic regime, the conflict in Kosovo, as well more general issues such as asymmetric size of the two parts,[6] differences in levels of economic development (see Figure 1), and in economic structure (Serbia has a historical tradition in industry compared to the largely services-based economy of Montenegro) generated a lot of discontent within Montenegro. Indeed, the late 1990s saw a surge in independentist sentiment in Montenegro (Hockenos and Winterhagen, 2007; Morrison, 2008; Vukicevic, 2017).

FIGURE 1 — GDP per capita in Serbia and Montenegro



Source: Maddison project

As the Milosevic regime went down in 2000, the European Union decided to have a more active role in the mediation of the legal status of SFRY, so in March 2002 Montenegro and Serbia signed

[5] For a fuller history of Montenegro and of the Sandzak region see, inter alia, Stevenson (2018); Morrison (2008); Morrison and Roberts (2012).

[6] Population of Serbia (wihout Kosovo) was 7.5 million compared to 670 thousand people in Montenegro.

the so-called Belgrade agreement which tied them in a loose union with a common market, while the EU served as an administrator of the agreement. The February 2003 Constitutional Charter of the State Union clarified the legal status of the union as well as the relationship between the Republics. Policies on foreign affairs, defence, foreign trade and human and minority rights were in the hand of the federal authorities, while all other policy areas—including monetary policy, taxation and customs—were at the exclusive right of the member states. Therefore, a great degree of federal autonomy was incorporated into the State Union, including also an opt-out to independence via referendum.

Montenegro did seek independence via a referendum on 21 May 2006 and decided to leave the State Union just by a small margin of votes.[7] On June 3 2006 Montenegro declared its independence, and Serbia followed with its own declaration two days later. While the referendum margin was quite small—only around 2,000 votes—and Montenegro did have a sizable Serbian minority (30%), the separation of Serbia and Montenegro went down peacefully (Darmanovic, 2007), and the two countries—after a century of being part of the same political entity—established working relationship, now as independent states. Their trade relations were soon to be normalised further, as on 19 December 2006 both countries signed their accession to CEFTA, a regional free trade area, with free trade rules established fully by the end of 2010 (Begović, 2011). Since, political relations between the two countries have been very friendly and economic ties remain very close. Politically, the two countries participate jointly in a number of— mainly EU-sponsored—processes, such as CEFTA, the EU's Stabilisation and Association process, the SEE2020 Strategy overseen by the Regional Cooperation Council, and others. Economically, Serbia constitutes the main trade partner of Montenegro, accounting for 13% of the latter's exports and 25% of its imports.[8]

As this brief review demonstrates, the process of separation between Montenegro and Serbia has been a long process, starting already sometime in the mid- to late-1990s and culminating into the official separation in the summer of 2006. Still, economic and political relations were never too disturbed and the two countries continued to have close economic ties and to participate in common political fora throughout the period. In this sense, the declaration of independence in 2006 represents a somewhat marginal event—and by implication, our measurement of its economic impact represent likely lower-bound estimates of the potential effects of independence in the general

[7] The referendum result was 55.5% in favour of independence. Prior to the referendum, the EU had set a required minimum majority of 55% for independence to be recognised.

[8] Source: https://atlas.media.mit.edu/en/profile/country/mne/.

case. On the other hand, the smooth nature of this separation also implies that our estimates of the economic impact of independence—as already mentioned in the Introduction—are generally unaffected by significant policy changes or political upheavals which are often present in cases of new state formation through unilateral declarations of independence. In that sense, the effect of independence that we can estimate for the case of the Serbia-Montenegro separation may have to do more with a psychological effect—the change in perceptions about economic opportunities in the two countries and ultimately a new economic optimism that may arise with acquisition of full state sovereignty—than with an effect associated to policy delivery *per se*. In what follows we examine exactly the effect of independence under this prism, keeping in mind the observations made here about policy continuity and the absence of significant structural breaks with regard to the policy paradigm in any of the two countries. As we show, there is a significant—but transitory—effect arising from secession, but not from autonomy per se, a result which seems to support the idea of a psychological effect—over, beyond and independently of any policy-content effects.

III. Approach, data and methods

To explore the economic effects of Montenegro's (and Serbia's) independence we focus on GDP per capita as the key economic outcome and apply the synthetic control method developed by Abadie and Gardeazabal (2003) and Abadie et al. (2010). The method is widely used in the literature to examine the causal effects of policy changes or interventions more generally.[9] Similar to the difference-in-difference (DiD) approach, it compares pre- and post-treatment outcomes between a treated group (usually, a single case) and a control group. Unlike the DiD approach, however, it does not rely on a pre-selected control group for which the parallel trends assumption must hold. Instead, it constructs a counterfactual ('synthetic') outcome for the treated that should hold in the absence of the treatment, by means of a linear combination of outcomes from a set of 'donors' drawn from a larger 'donor pool', with weights estimated from a pre-selected set of covariates which match, in the pre-treatment period, the outcomes observed for the treated. Given recent criticisms about the computational method for the derivation of weights of the Abadie approach, suggesting that this may overestimate the true effect Becker and Klößner (2017, 2018a) we also use an alternative computational method and compare the results.[10]

[9] See, inter alia, Imbens and Wooldridge (2009); Billmeier and Nannicini (2013); Miguel and Roland (2011) or Pinotti (2015).

[10] Using the R package MSCMT developed in Becker and Klößner (2018b), while for Abadie and Gardeazabal (2003) we use Synth package developed in Abadie et al. (2011).

In the particular case at hand, the synthetic control approach allows us to construct Serbia's and Montenegro's economic trajectory—in terms of GDP per capita—had the two countries not separated in 2006. We first obtain a linear combination of non-treated countries (i.e., ones which did not experience sovereignty changes) which successfully predicts Serbia's and Montenegro's GDP per capita pre-independence; and then use this to construct the 'synthetic' GDP per capita values for Serbia and Montenegro post-independence. These synthetic values—representing a prediction of the unobserved counterfactual trajectories in GDP per capita in the two countries had they not separated—are then contrasted to the observed values of GDP per capita. Under the assumption of stability in the relationships predicting GDP per capita for the two countries, the difference between observed and counterfactual values can be interpreted as the causal effect of the treatment, in our case the official separation of the two countries.

Implementation of the synthetic control method requires a choice on two key components: the set of covariates (i.e., the variables on which to match the donors and the treated pre-treatment) and the donor pool (i.e., the set of countries which can potentially give weights to the synthetic outcome). Our analysis uses a large set of covariates that are relevant in explaining country and temporal variations in GDP per capita. Following Campos et al. (2018), this includes the investment share to GDP, population growth, income per capita, labour productivity and the employment-to-population ratio (from the Penn World Tables, Feenstra et al. (2015)), as well as the value-added and employment shares of agriculture and industry and the shares of imports and exports to GDP (from the World Bank Indicators). Although data coverage, separately for Montenegro and Serbia, starts from 1990, we discard observations before 1995 due to the political instabilities and violent conflicts in the ex-Yugoslavia in the beginning of 1990s. The data used are presented in Table 1 in the Appendix.

Using this set of variables, we have in total 65 potential countries which can be in the donor pool. In our core analysis we select a subset of these, comprising 15 countries from Central Eastern Europe, the Western Balkans and the EU's Eastern Neighbourhood, which share a similar history of post-communism transition and EU association and thus are deemed as broadly comparable to Montenegro and Serbia also in terms of geo-political context.[11] We present the results from this core analysis in the usual fashion, reporting the trajectories of synthetic and actual Montenegro/Serbia before and after independence as well as the country weights that load into the synthetic outcomes. In order to provide some inferential base for the estimated gap, we implement the stan-

[11] Albania, Bulgaria, Cyprus, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia and Ukraine.

dard placebo testing found in the literature (following Abadie and Gardeazabal (2003), replicating the analysis for the non-treated countries in our donor pool and comparing the Montenegro and Serbia results with those of the placebo tests. If the observed gaps found for Serbia and Montenegro are smaller to those found for other countries in the placebo exercise, we cannot discard the possibility that the estimated effects for our cases are driven by some unobserved confounding factor or underlying process.

Concerning the issue of counfoundedness, we extend our analysis in two ways. First, by removing from our donor pool the country which is an immediate neighbour of Serbia and Montenegro (Albania, which incidentally comes up as the main contributor in the synthetic control exercise) and repeating our analysis for the remaining countries in the donor pool. This allows us to avoid a donor-dependency in the results arising from the fact that one of the contributors in the donor pool may have also been treated (i.e., affected directly by the separation of Serbia and Montenegro). Second, by examining openly the possibility that economic developments post-independence in the two countries—and in particular in Montenegro—may have been related more to changes in FDI flows than to independence per se. To this purpose, (a) we replicate our analysis including FDI in our set of covariates and (b) implementing a synthetic control exercise for FDI in Montenegro, which allows us to examine if there is a shift in this variable at the point of independence, which may explain any shift in GDP per capita found post-independence.

For further robustness, we also implement an extended donor resampling exercise, following Campos et al. (2018), to examine the extend of donor dependency in our core results. From the full set of 65 countries for which we have data we randomly select a donor pool with the same cardinality as our original donor pool (15 countries) and re-estimate the impact of independence for our cases from this alternative donor pool. We replicate this 1,000 times, thus deriving a distribution of estimates for the effect of Montenegro's (and Serbia's) independence. We then present two visual checks. The first shows the range of effects estimated with alternative donor pools, providing pseudo-confidence intervals and allowing us to test whether the result deriving from the donor pool of our choice, in the core analysis, represents an outlier. The second allows us to examine more directly the issue of donor-dependency: it plots the weights assigned to each of the 65 countries, in each of the 1,000 replications, against the range of estimated effects (gaps in actual and synthetic GDP per capita series). If the patterns depicted in this plot appear random, this can be taken as confirmatory evidence suggesting no donor-dependency in the obtained results.

IV. Results

IV.1. Montenegro

We start our analysis for the case of Montenegro, the main case of interest, as it was Montenegro's declaration of independence which triggered the dissolution of the State Union. Figure 2 presents the results from our core analysis, using the Abadie and Gardeazabal (2003) synthetic control method and our core donor pool of 15 New Member States and EU-associated countries. As can be seen, the trajectories for the observed and synthetic Montenegrin GDP per capita indicate a sizeable positive effect from independence, which was however shortlived—starting to decline post-2008 and eventually converging to near zero by 2014. In the fitting period (1995-2005) the synthetic series follows closely Montenegro's observed GDP per capita, showing that the selected donor pool fits particularly well the case at hand. Soon after the declaration of independence by Montenegro, however, i.e., already by the end of 2006, observed Montenegro records higher levels of GDP per capita. The gap peaks in 2008 at a value of 3,114 2011 US dollars, almost 25% above the synthetic outcome. From then on, the gap starts to shrink, a bit abruptly in 2009 and then more steadily until the end of the period covered by our data. On the basis of this, the first conclusion to be drawn is that independence seems to have had a sizeable but only temporary effect for Montenegro.

Figure 2 — GDP per capita: observed and synthetic Montenegro

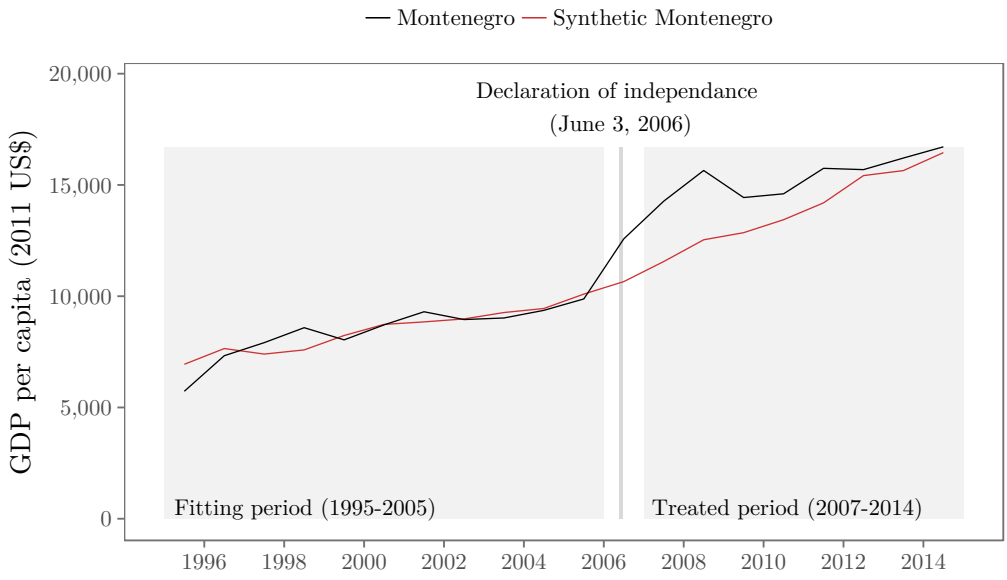
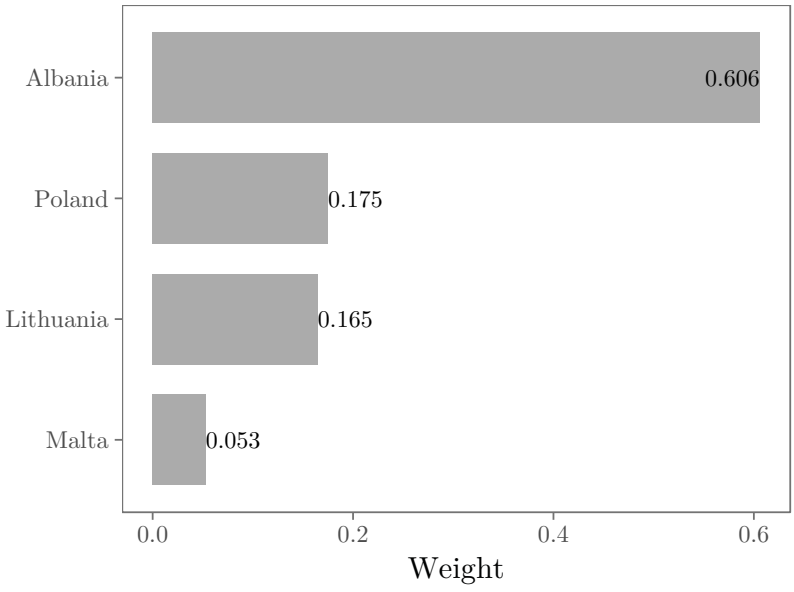


Figure 3 shows the country weights underpinning the results of Figure 2. As already noted, neighbouring Albania contributes the most in the weights for the construction of synthetic Montenegro (60.6%). Poland and Lithuania each contribute with one sixth, while Malta takes up 5%. To examine whether the obtained results are driven by the case of Albania, which may also had been directly affected by the dissolution of the State Union as a direct neighbour of Serbia and Montenegro, we replicate this analysis excluding this time Albania from the donor pool. The results from this exercise are particularly reassuring (see Figures 13 and 14 in the Appendix). Synthetic Montenegro comprises now of Georgia (55.2%), Poland (35.3%) and Malta (9.5%). The fit in the fitting period is equally good and the estimated effect remains the same: the predicted gap rises already from 2006, peaks in 2008 (at 3,234 2011 US dollars this time) and declines subsequently, getting completely eliminated by the end of the period (a difference of -7 2011 US dollars in 2014). Similarly reassuring are the results from the exercise replicating this analysis using this time the alternative computational method proposed by Becker and Klößner (2018a) (see Figures 11 and 12 in the Appendix). This produces identical results to those obtained from the Abadie and Gardeazabal (2003) method when Albania is excluded, both with regard to the country weights and with regard to the size and evolution of the gap.

FIGURE 3 — Weights to construct synthetic Montenegro



While these tests increase our confidence about the accuracy of the obtained results, it is important to examine further whether the observed effect of independence for Montenegro could have been produced in a probabilistically random way. A first step for this is the implementation of the placebo testing proposed by Abadie and Gardeazabal (2003). To implement this, we assign

treatment status to each of the countries in our baseline donor pool, re-run the estimation, and report the gaps of the observed and synthetic outcomes for all 15 replications. The results from this exercise are presented in Figure 4a. As can be seen, for the period immediately following independence (2006–2008), Montenegro's gap is above those observed for all other countries, indicating that this is not merely a random realisation. The only two cases approximating the Montenegrin gap are those of Slovenia and Romania (with the trend, in both cases, starting on the year of their respective accession to the EU—consistent with the results reported in Campos et al. (2018)).[12] Post-2008, the gap for Montenegro is becoming relatively small compared to the other gaps and by 2014 the gap stands very close to zero and below the mean value of the placebo gaps. This result corroborates clearly the interpretation given earlier, that independence produced a positive but shortlived (temporary) effect for Montenegro.

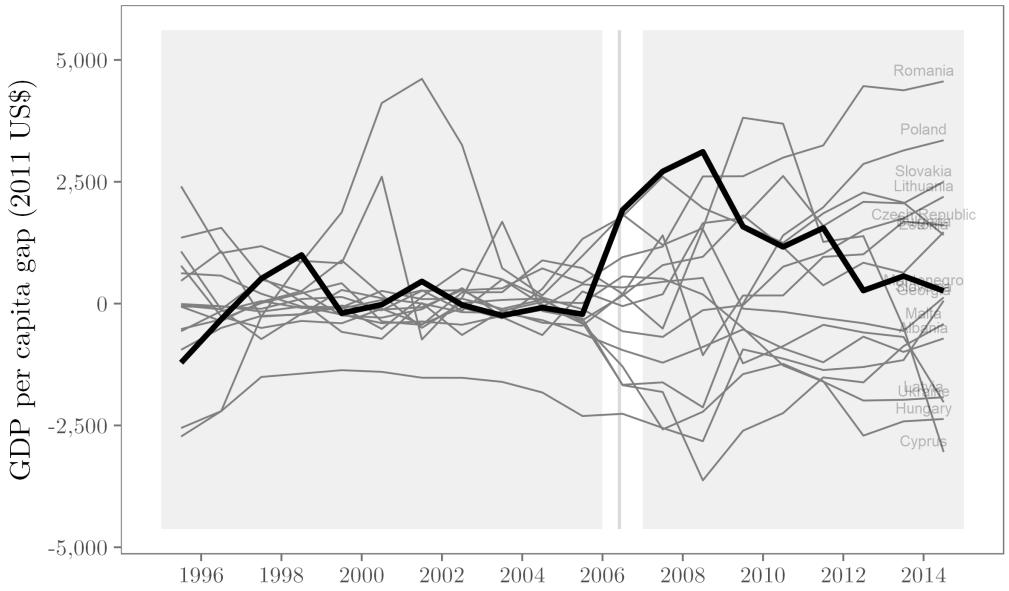
A second way of making a probabilistic inference for the validity of this result is by means of the donor-pool dependency test as demonstrated in Campos et al. (2018). Figure 4b presents the results from this analysis, involving 1,000 donor resampling replications with constant-size donor pools (15 countries), drawn from the full set of 65 countries in our data. Our original estimate (black line) and the 5th and 95th percentile of the resampling results (darker gray lines) are highlighted for ease of inference. As can be seen, our preferred estimate (based on the baseline donor pool) belongs clearly to the lower bound of results. At the extreme (95th percentile), we get estimated gaps reaching 4,775 2011 US dollars in 2008; while our lower-bound estimate (5th percentile) for the same year is at 2,774 2011 US dollars. In all cases, we find an unambiguous positive income effect for Montenegro, following independence.

Post-2008, the predictions of the gap seem to diverge. For the most extreme estimates (near or above the 95th percentile), the positive gap persists, surviving a small reduction in 2009-2010 (presumably associated with the effects of the Global Financial Crisis—see section 4.3) and reaching 2014 at values similar to those observed in 2008. However, for the vast majority of the obtained estimates, the gap does not recover post-2010 or, even more, continues to decline. At the median, the gap in 2014 is about 57% of that found in 2008, while more than 7% of the realisations indicate a negative gap. As the zero-gap in 2014 lies within the 5% (pseudo-)confidence interval, we are forced to conclude that the hypothesis of a temporary-only positive effect of independence for Montenegro cannot be rejected. This, despite the fact that the main thrust of results shows a subsided but still positive effect even 7 years past independence.

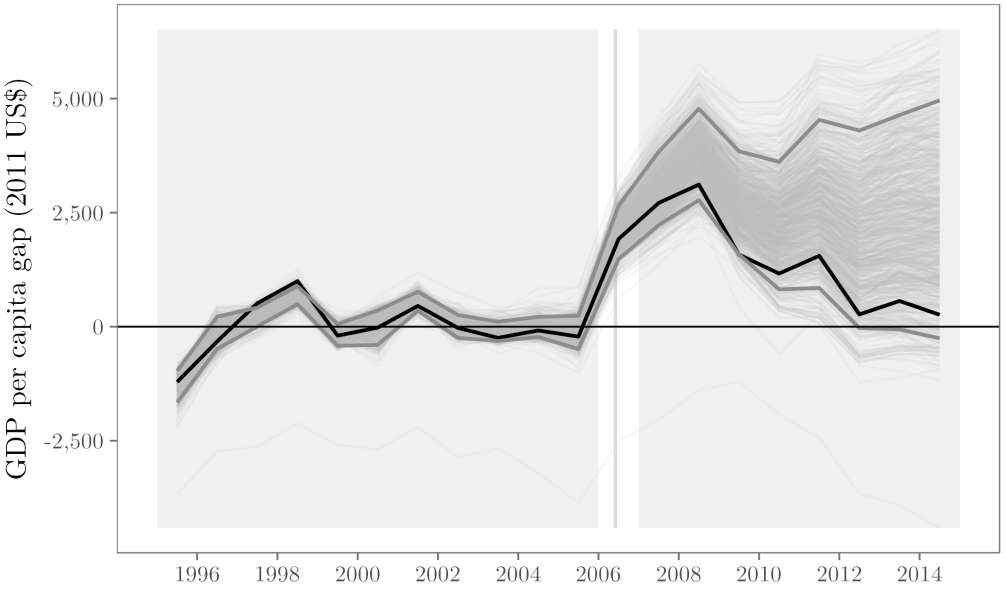
[12] Malta, Hungary and Poland appear to have experienced a negative shock compared to their synthetic counterfactuals.

FIGURE 4 — Placebo testing and random donor resampling

(A) Placebo testing



(B) Donor resampling

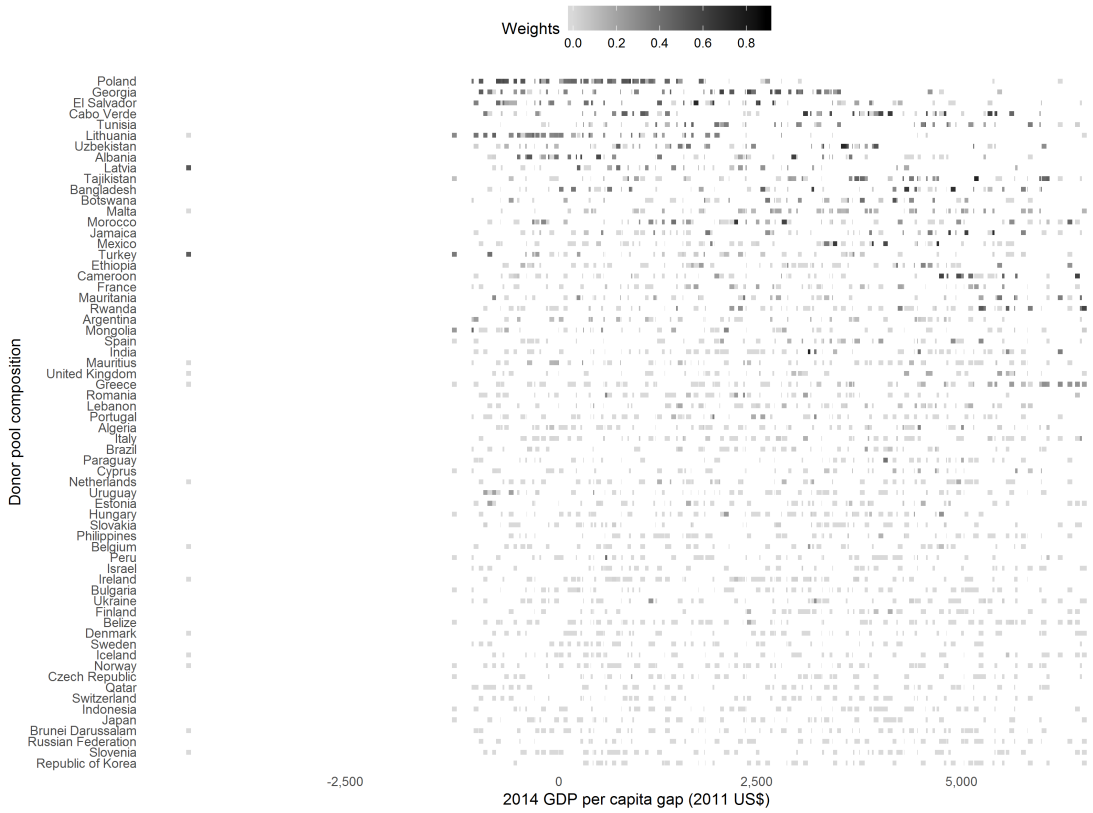


We take this analysis one step further and in Figure 5 we present a novel depiction of the results underpinning Figure 4b, allowing us to examine whether the size of the estimated gap (across the 1,000 realisations) is driven by any particular countries.[13] This is important not only as a question

[13] An R routine for the implementation of this analysis is currently under development and can be made available from the authors.

of curiosity but also in order to inform our inference about which range of results may seem more plausible given the specific geographical, political, historical etc. context of the case at hand.[14] As can be seen, the distribution of weights across the different values of the estimated gap appears reasonably random. The countries appearing as the main contributors in the derivation of the weights seem to share one of two key characteristics with Montenegro: either a recent history of post-communist adjustment and EU association (Poland, Georgia, Lithuania, etc.) or a geo-morphology related to marine and tourist activities (island or sea-shore economies—El Salvador, Tunisia, Cabo Verde, etc.).[15] Among the main donors, Poland and Lithuania appear to produce smaller (and sometimes negative) estimated gaps; while Georgia and Cabo Verde are generally associated with larger gaps. Besides these observations, however, it is difficult to decipher any particular geography or other pattern in the data. This provides further reassurance for the overall validity of our obtained result.

FIGURE 5 — Donor resampling exercise: donor composition (most important donors on top)



[14] To clarify, we use this depiction in order to examine whether very high (or very low) values are associated with any particular geography (e.g., countries drawn disproportionately from Latin America) or geo-morphology (e.g., island/inland countries, small/large countries, etc.).

[15] Inversely, the list of countries offering consistently the lowest weights includes countries with very different political economies and economic histories, such as South Korea, Japan, Russia, Switzerland etc. Notably, however, it also includes some countries with perceivably similar histories (Slovenia, the Czech Republic, Bulgaria, Ukraine, Estonia, Hungary and Slovakia).

IV.2. Serbia

The case of Serbia allows us to test whether the effects of independence are 'symmetric', i.e. if they apply equally and in the same manner to the seceding entity and the one 'left behind'. Formally, Serbia also declared its independence—only two days after Montenegro—and in this sense also obtained increased policy autonomy and state sovereignty. If the effect of independence is uniform irrespective of context, we would expect to find a similar—positive but transitory—effect for Serbia's independence. If, inversely, the effect of independence comes from a psychological effect (sense of 'liberation', emergence of new economic opportunities), then the effect for Serbia could be much different.

We examine this in Figure 6. For reasons of brevity, we do not include the full set of visual depictions, but only present the graph concerning the donor resampling exercise (analogous to Figure 4b), which captures the effect in detail. The results indicate that Serbia's independence produced a qualitatively very different effect compared to Montenegro. In the years following immediately the dissolution of the State Union, the gap between observed and synthetic GDP per capita for Serbia was fluctuating around zero for most of the donor pools. On the whole, while our baseline specification (black line) indicates a negative effect on Serbia's output[16], falling below -2,500 2011 US dollars in 2014, the estimated effects falling within the 5th and 95th percentiles of effects include both negative and positive estimates throughout the period. Thus, and although by 2014 only around 20% of donor pools yield a positive effect of independence for Serbia, the range of the obtained results means that we cannot unambiguously claim any sign for the effect of independence, as the implied null of a zero-effect lies well within our (pseudo-)confidence interval.[17]

Descriptively, however, we can make some further observations. In all resampling realisations, the year following Serbia's independence (2007) has been a year of relative decline; while 2008 and 2009 were years of relative recovery. From there on, our estimates diverge. For the majority of realisations, Serbia follows a downward trend compared to its synthetic counterfactual (as fitted in the pre-independence period), losing ground uninterruptedly between 2010 and 2014. But for a small subset of realisations Serbia over-performs its synthetic counterfactual at least since 2011.[18]

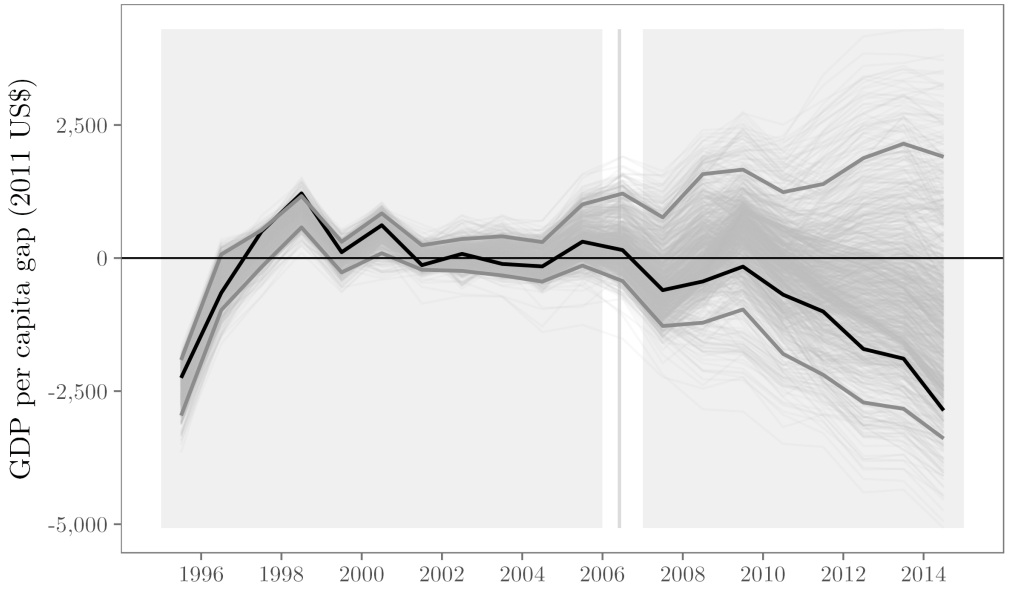
[16]Using the baseline donor pool, synthetic Serbia comprises 55.2% Albania, 37.1% Lithuania, 7.2% Georgia and 0.2% Poland and Ukraine, each.

[17]We obtain very similar results, corroborating this conclusion, from the remainder of tests that we performed (placebo testing, estimation of weights via the Becker and Klößner (2018a) method), which are available upon request.

[18]From results not shown, analogous to Figure 6, it appears that Serbia over-performed its synthetic donors who were heavily affected by the crisis, but lagged significantly behind synthetic donors who were relatively unaffected.

In all cases, the trajectories depicted suggest a minimal—if at all present—role of independence for the subsequent evolution of GDP per capita. Compared to the changes observed following the eruption of the Global Financial Crisis, the changes in 2006–2007 are rather miniscule. It is thus reasonable to conclude that for Serbia independence had no substantive economic effect—at least not until the eruption of the crisis.

FIGURE 6 — GDP per capita: observed and synthetic Serbia (donor resampling)



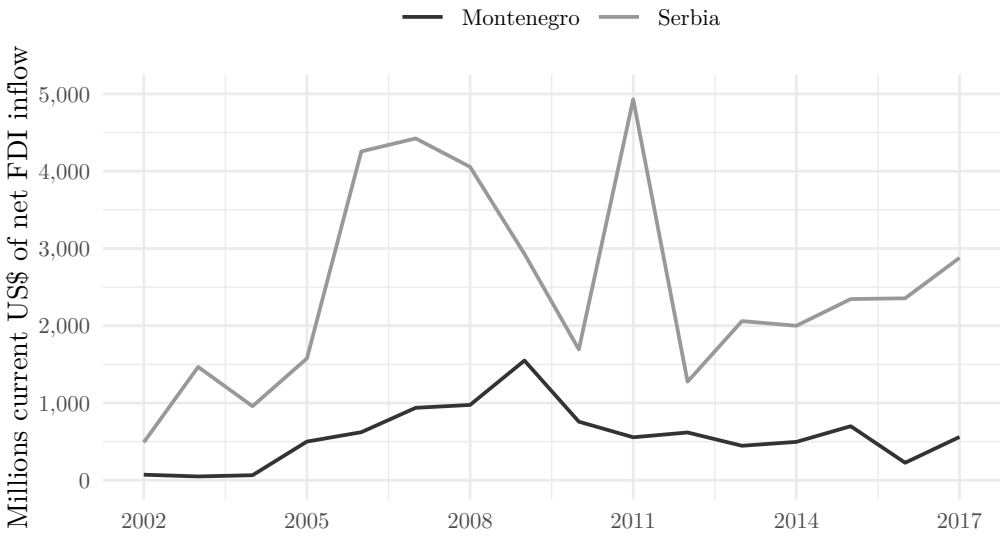
V. Further analysis: crisis and the role of FDI

This last observation—together with the transitory nature of the effect observed for Montenegro—raises an important question. Is the deterioration of economic performance observed for the two countries, with the advent of the Global Financial Crisis, related to an increased vulnerability for the two countries to shifts in the international economic environment following their separation? Inversely, for the case of Montenegro, could the observed positive effect for the 2006–2008 period be driven by an underlying confounding factor, not directly or exclusively related to independence? Although we cannot provide definitive answers to either of the two questions, in this subsection we attempt a tentative exploration of the issue, by looking at the role played by international capital flows, in the form of foreign direct investments (FDI).

FDI has been historically very low in the two countries, representing in the State Union values below or well below 1% of GDP until the turn of the century. The situation changed with the political stabilisation in the region after 2002 and FDI started increasing steadily in both countries since 2004—reaching, according to UNCDAT data, values around or above 20% of GDP in Montenegro and near or below 10% of GDP in Serbia. In both countries, this fast rise in FDI was interrupted with the Global Financial Crisis (Bartlett and Prica, 2012; Radenkovi et al., 2015), as is also depicted in Figure 7. Visual inspection of the trends depicted in Figure 7 suggests that FDI does not seem to have been a part of the story concerning the causal effects of independence. In both countries, FDI started to increase well before the 2006 declarations of independence and—if anything—in Serbia FDI inflows stabilised immediately after independence; while in Montenegro FDI inflows continued to growth at the same pace as before. In both cases there is a collapse of FDI coinciding with the Global Financial Crisis, even if the fall in Serbia pre-dates that of Montenegro by a couple of years. Since 2012 FDI inflows for Serbia seem to have been on a recovering path, whereas for Montenegro FDI inflows seem to have stabilised completely. On the basis of these trends, it is difficult to decipher any direct relationship between FDI (as a measure of exposure to vulnerabilities associated with the crisis) and the GDP per capita gaps derived from the synthetic control analysis, at least for the case of Serbia: Serbia's deteriorating gap since 2010 doers not seem to square either with the sudden fall in FDI (in 2008/09) or with the upward trajectory that FDI has followed since 2012.

The case of Montenegro is slightly less straightforward. Montenegro's FDI acceleration happened well-before the GDP per capita acceleration observed in the synthetic control analysis; neverthe-

FIGURE 7 — Net FDI inflow in Serbia and Montenegro



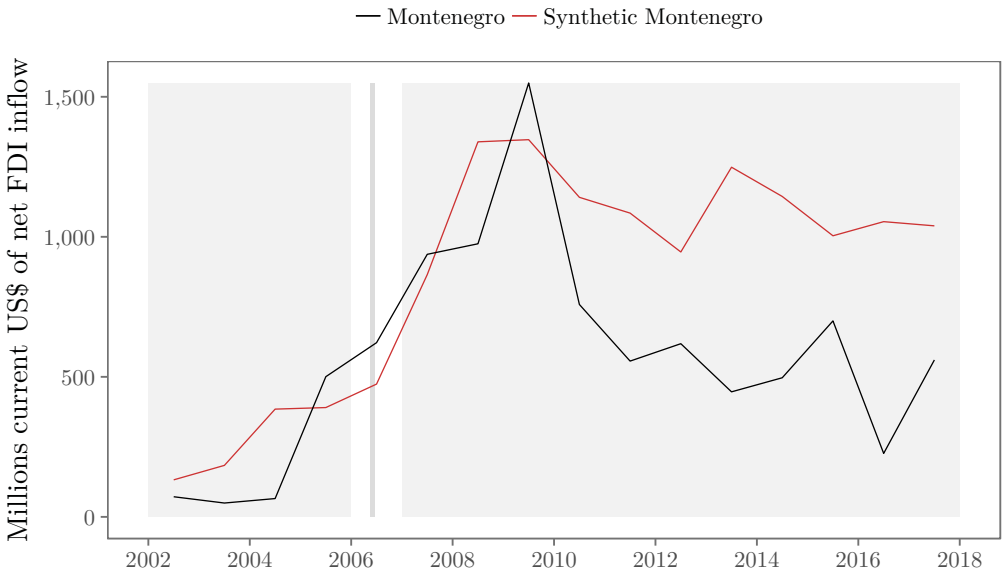
Source: World Bank Indicators

less, the gradual elimination of the positive gap does coincide temporally with the decline in FDI flows after 2008. It appears that this case warrants some further exploration. We do this by implementing two further pieces of analysis. First, we re-run our baseline analysis for Montenegro, this time including FDI in our list of covariates. If FDI had been an important driver for the economic acceleration seen in Montenegro since independence (while not being causally driven by the latter), inclusion of this variable in the analysis should produce a much toned-down post-independence effect. In contrast to this expectation, the results obtained in this analysis are almost identical to the core results presented earlier (see Figures 13 and 14 in Appendix): the sizeable positive gap peaking in 2008 remains and the gap starts declining thereafter, practically disappearing by 2014. This reinforces further our earlier conclusion, that a positive economic effect from independence exists, albeit a transitory one.

Our second test concerns the potential role that independence may have had for FDI inflows. To examine this we implement a synthetic control analysis, similarly to the one implemented for the case of GDP per capita, this time treating FDI as our outcome variable of interest (Figure 8). Data availability in this case restricts us to a shorter fitting period (2002–2005). Despite this, the fit between observed and synthetic FDI appears broadly satisfactory. Importantly, the synthetic series follows very closely the actual FDI flows until 2008 but fails to mirror the substantial drop in FDI experienced by Montenegro since 2009.[19] We can draw two inferences from this evidence. First,

[19]The result is marginally insignificant at the 5% level using our pseudo-significance criterion (95th percentile from

FIGURE 8 — Net FDI inflow: observed and synthetic Montenegro



and consistent also with the descriptive evidence in Figure 7, we observe no change in FDI trends around the year of Montenegrin independence. In other words, FDI does not appear to have been the vehicle via which the positive effects from independence materialised in Montenegro. Second, and inversely, we do observe a significant break with the underlying FDI trend (as captured by the synthetic series) since 2010, i.e., as the Eurozone crisis started to unfold following the Global Financial Crisis. This experience is unique for Montenegro (compared to its donor pool) and may well explain the subsiding of the positive GDP per capita gap in the same period (and against the same baseline donor pool). If this is a valid link, the implication is that independence brought with it vulnerabilities which may have annulled the positive effects of independence when global financial turbulence ensued. In contrast, in the case of Serbia (results not shown but available upon request) we observe no substantive gap between synthetic and actual FDI since the eruption of the crisis—indicating that Serbia's worsening economic performance via-a-vis the synthetic benchmark (in terms of GDP per capita) is not related to an increased vulnerability with regard to changes in international capital flows associated to the crisis.

1,000 resampling realisations) but in economic terms it is very sizeable.

VI. Conclusions—lessons for Europe

The current juncture in the political economy of Europe is one of accelerating political disintegration. This is evident not only in the recent pro-independence referendum in Scotland, Catalonia and Britain, but also in relation to wider calls for more national autonomy against the tide of economic and political integration seen in previous decades. Nevertheless, empirical evidence concerning the economic dividends, or penalties, of independence remains thin in the academic literature.

Unlike historical cases of secession and new state formation, the recent dynamic towards political disintegration concerns mainly peaceful separations, of entities which have been enjoying already a great degree of policy autonomy and which have typically higher levels of development than the unions to which they belong—ensuring much policy continuity post-secession, limited disruption from military conflicts and, presumably, limited scope for gains from acquiring additional policy autonomy.

Motivated by these observations, in this paper we exploited the unique case of the dissolution of the State Union of Serbia and Montenegro in 2006 which, uncommonly for the region, shares many of the features described above. Our purpose was not only to provide an ex post evaluation of the economic effects of separation for Serbia and Montenegro but also to help shed light, in an ex ante fashion, on the possible effects of independence concerning contemporary cases of political disintegration. Our analysis relied on state-of-the-art techniques which are particularly suited for the study of the causal impacts of unique historical events By applying the synthetic control method, as developed by Abadie and Gardeazabal (2003) and Abadie et al. (2010), (and further advanced by, among others, Campos et al. (2018) and Becker and Klößner (2018a), we were able to construct a counterfactual for the economic trajectories that may had been followed by Serbia and Montenegro had they not separated. Compared the observed trajectories against the 'synthetic' counterfactuals, we were able to measure the economic impact that independence had for the two countries.

Our findings are particularly informative. We find that independence for the seceding country (Montenegro) had a sizeable but transitory positive effect, boosting GDP per capita in the period immediately following independence, but with gains slowly evaporating in the longer period. Exploring this effect further, we unveiled suggestive evidence indicating that part of the explanation for the transitory nature of this effect lies perhaps with an increased vulnerability of the newly

independent state to fluctuations and uncertainty in the international economic environment. Instead, the immediate economic gains do not seem to be much related to such fluctuations (as peroxided by the evolution of FDI flows into the country), suggesting in turn that such gains may be related more to a 'psychological' effect, possibly associated to new economic optimism and political confidence. For the entity 'left behind' (Serbia), the effects are markedly different. We find no evidence of an independence dividend, neither in the immediate aftermath of separation nor in the longer run. In fact, Serbia's economic performance (measured in terms of GDP per capita) continued to deteriorate gradually against the synthetic benchmark throughout the post-separation period, even if the scale of this effect does not seem to carry much statistical confidence. In contrast to the case of Montenegro, this trajectory for Serbia seems unrelated to the country's record with FDI inflows post-independence and, by implication, to any increased vulnerability that one could associate with the international economic environment. Rather, Serbia's relative economic underperformance (against the counterfactual) may be linked to a loss of dynamism associated with the loss of scale in its internal market.

We cannot directly project these findings to the cases that concern the contemporary political economy of Europe. Despite the stated similarities, the economic, political and institutional context of cases such as those of Catalonia's unilateral declaration of independence or Britain's vote for exiting the European Union remains historically unique. Nevertheless, the evidence deriving from our analysis of the Serbia-Montenegro case is still informative and can provide a general guide for such cases. In cases with substantial policy autonomy pre-seperation, seceding states may still benefit from separation even without significant, paradigmatic, policy shifts. Our intuition is that this is linked to a positive psychological effect, both internally (e.g., economic confidence driven by a sense of national pride and new-found assertiveness) and externally (e.g., perceptions by international market actors about new economic opportunities in the newly-independent state). The nature of this gain, however, also means that the positive effects of independence may soon diminish—or even evaporate—if confronted with an environment of economic and political uncertainty.

For the case of Catalonia, this would seem to suggest that the political tensions that arose with the unilateral declaration of independence—which was deemed unconstitutional by the Spanish Constitutional Court—may threaten to annul any positive economic effects that may be expected to arise from acquisition of full state sovereignty by the Catalan authorities. Quite similarly, for the case of Britain the uncertainty surrounding the conditions of Brexit—whether a so-called 'Brexit

deal' will be achieved and what will be the economic relations with the EU post-Brexit—may also threaten to fizzle out any prospective gains from 'independence'.

The effects for the countries, or entities, 'left behind' can be markedly different. Drawing from the case of Serbia, uncertainty and exposure to international volatility would appear to be much less of an important concern for these cases. Applied to the examples of Spain and the EU, it would be reasonable to expect that uncertainty and economic turbulence will affect these cases—following a prospective, or hypothetical, Brexit or Catalan-exit—much less, if at all—perhaps due to their size but also plausibly due to their perceived historical continuity with the previous state of affairs (maintaining the core of the pre-separation union). Still, in these cases the direct effects of 'independence' appear to be at best non-positive. A psychological effect may well explain this, too: post-separation, the remainder of the union may be perceived as weaker (both economically and politically) and as 'lacking steam'. But the effect may also be driven by objective economic factors, for example the loss of a part of the internal market and of business and supply-chain linkages with the seceding territory. Although our analysis was not designed to provide definitive answers to these postulations, we contend that these postulations appear very plausible, both intuitively and on the back of the results reported here for the cases of Serbia and Montenegro.

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VIII. Appendix

Table 1 — Descriptive statistics

Variable	Mean	Std. dev.	Time span	Source
GDP per capita	17,975.260	17,550.560	1995–2014	Penn WT
GDP per employee	40,837.190	31,867.290	1995–2014	Penn WT
Population growth	0.010	0.016	1995–2014	Penn WT
Share of gross capital formation at current PPPs	0.226	0.085	1995–2014	Penn WT
Share of merchandise imports at current PPPs	0.338	0.239	1995–2014	Penn WT
Share of merchandise exports at current PPPs	0.279	0.237	1995–2014	Penn WT
Employment in population share	0.409	0.082	1995–2014	WB Indicators
Agriculture employment percentage	22.100	22.661	1995–2014	Penn WT
Industry employment percentage	24.072	9.012	1995–2014	Penn WT
Agricultue value added percentage	8.863	8.998	2000–2005	WB Indicators
Industry value added percentage	29.427	21.024	2000–2005	WB Indicators
Secondary education percentage	88.293	24.811	2000–2003	WB Indicators
Tertiary education percentage	39.079	23.680	2000–2003	WB Indicators

Note: Mean and standard deviations represent respective statistics for all 65 countries in the denoted time frame.

VIII.1. Baseline results for Montenegro including FDI as a control

FIGURE 9 — Weights to construct synthetic Montenegro

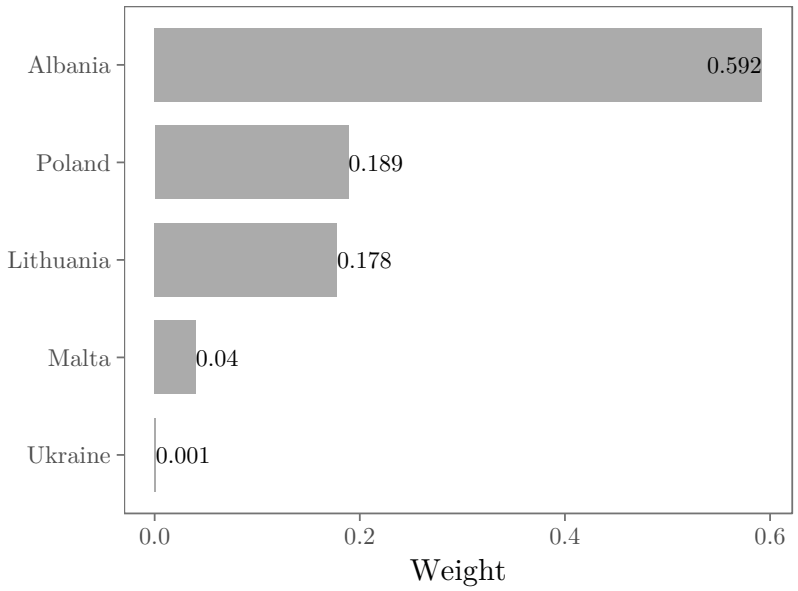
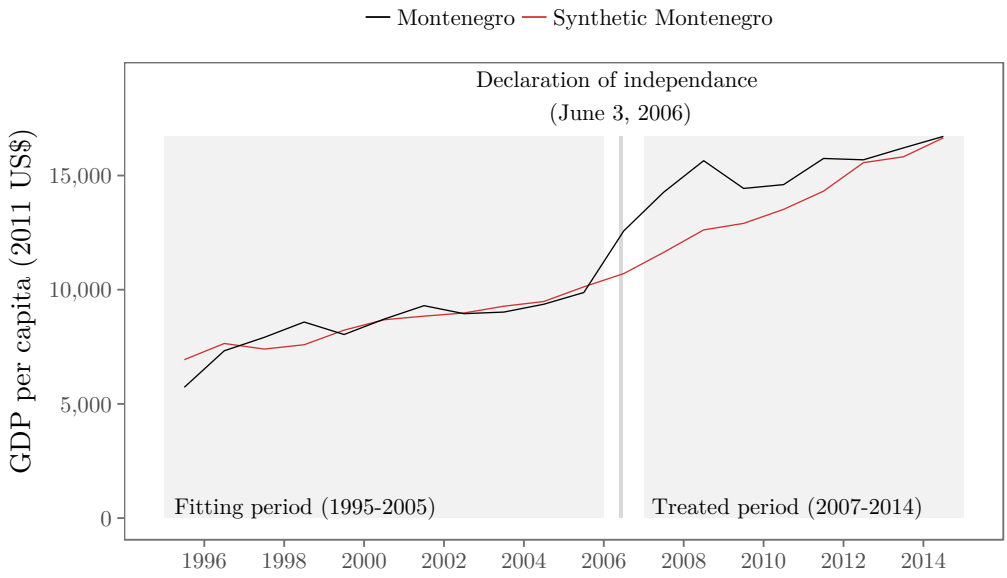


FIGURE 10 — GDP per capita: observed and synthetic Montenegro



VIII.2. Baseline results for Montenegro using Becker and Klößner (2018a) methods

FIGURE 11 — Weights to construct synthetic Montenegro

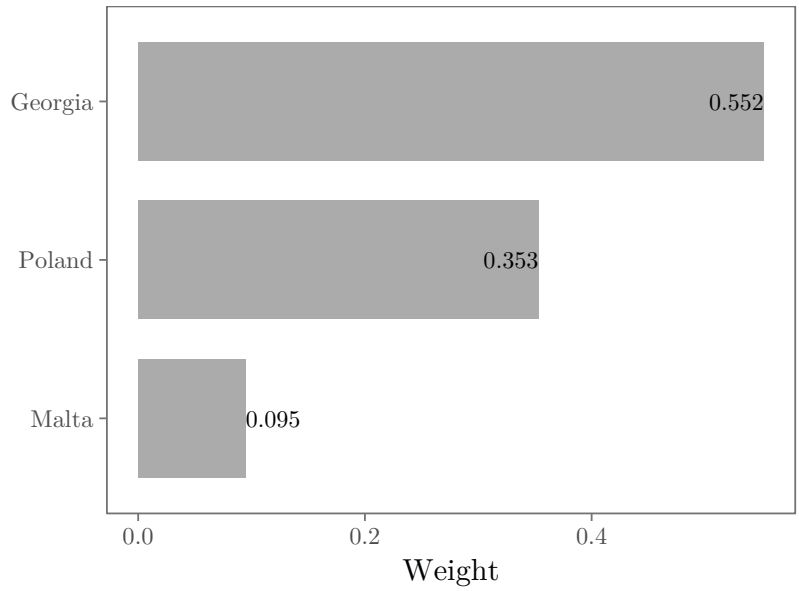
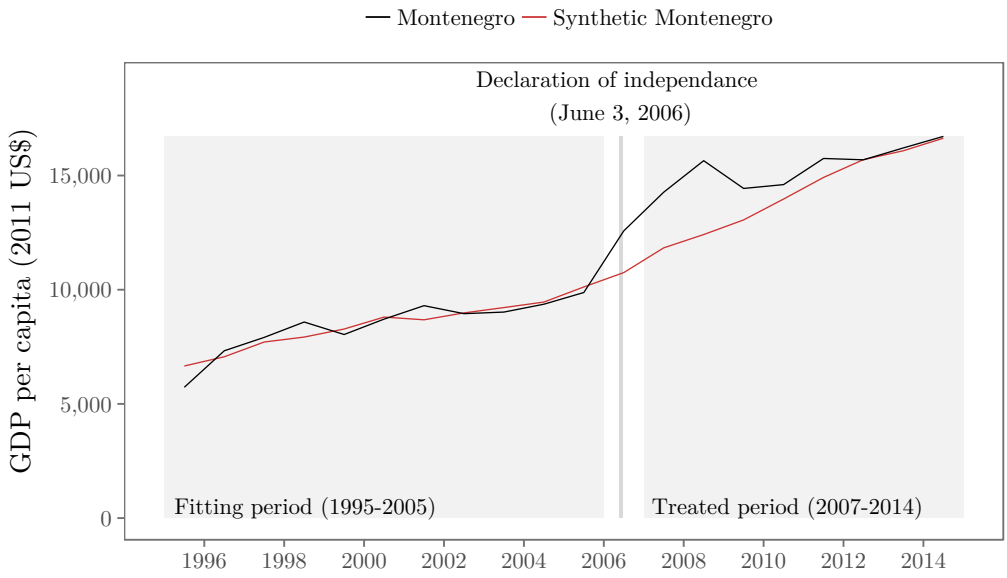


FIGURE 12 — GDP per capita: observed and synthetic Montenegro



VIII.3. Baseline results for Montenegro excluding Albania from the donor pool

FIGURE 13 — Weights to construct synthetic Montenegro

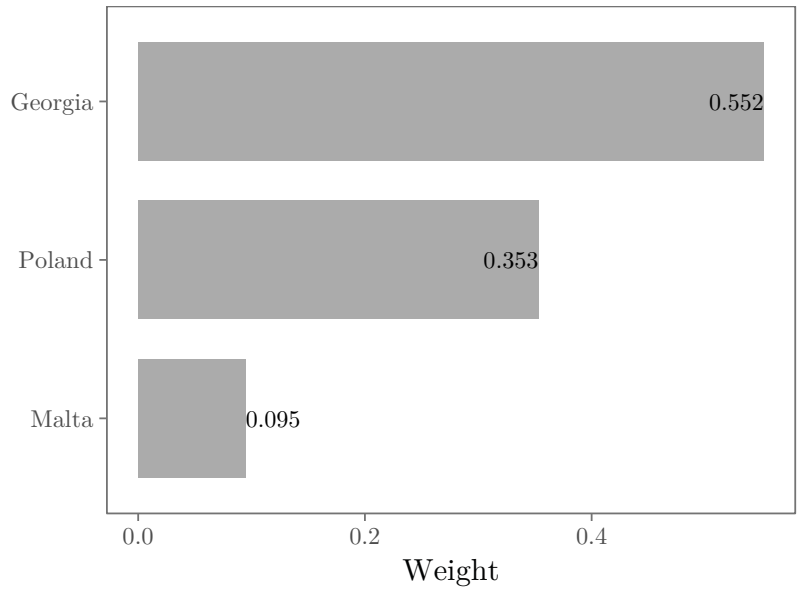
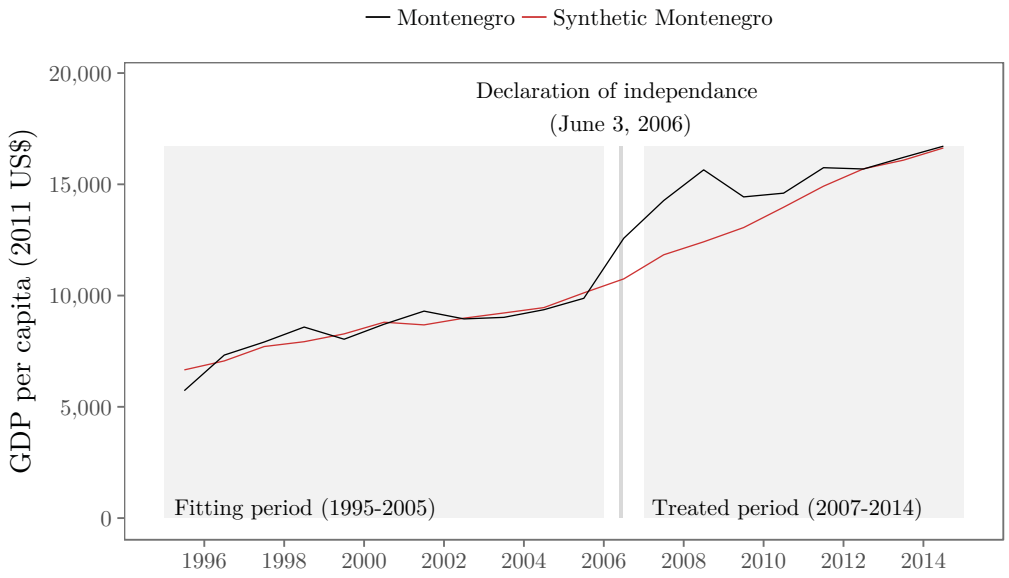


FIGURE 14 — GDP per capita: observed and synthetic Montenegro



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