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Regional Integration and the Rule of Law

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Abstract

This paper constructs agreement specific instruments in order to estimate the effect of membership in a regional cooperation agreement (RCA) on institutional change. For a sample of 144 emerging and developing economies, the results show that membership in a RCA explains a significant part of the cross country variation in institutional reforms. EU and NATO-related agreements are an important reason why emerging markets in Eastern Europe and Central Asia have been better reformers despite their socialistic heritage. RCAs are a main factor why African economies are still doing very poorly in terms of institutional reforms. I show that the construction of the RCA and the willingness delegate sovereignty is behind the effect on institutions and is an important transmission channel of how historical experiences are shaping current institutions.

JEL: F53, F55, H11, O11, O19
Keywords: Economic institutions, reforms, regional cooperation

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Regional Integration and the Rule of Law*

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July 5, 2015

This paper constructs agreement specific instruments in order to estimate the effect of membership in a regional cooperation agreement (RCA) on institutional change. For a sample of 144 emerging and developing economies, the results show that membership in a RCA explains a significant part of the cross country variation in institutional reforms. EU and NATO-related agreements are an important reason why emerging markets in Eastern Europe and Central Asia have been better reformers despite their socialistic heritage. RCAs are a main factor why African economies are still doing very poorly in terms of institutional reforms. I show that the construction of the RCA and the willingness delegate sovereignty is behind the effect on institutions and is an important transmission channel of how historical experiences are shaping current institutions. (*JEL* Classifications: F53, F55, H11, O11, O19)

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1. Introduction

Research on economic institutions shows that institutional arrangements in countries are very persistent over time. Abundance of natural resources and historical factors, such as colonial origins, are among the leading explanations as to why poor institutions persist (Acemoglu *et al.*, 2001). Despite several international programmes that specifically try to improve institutional settings in emerging markets and developing countries, little change can be observed over time (International Monetary Fund (IMF), 2005).

A number of theoretical papers have identified a commitment problem as the fundamental cause why lumpy institutions persist (Acemoglu, 2003; Acemoglu and Robinson, 2006; Hoff and Stiglitz, 2008). Winners of potential institutional reforms cannot credibly commit themselves to compensate the losers, such that a small number of politically and economically powerful elite groups will block reforms in order to avoid utility losses. The lack of internal commitment and the non-existence of a political Coase-Theorem drives a wedge between private and social returns to economic activity resulting in sub-optimal allocations of resources and asset stripping as economic elites will be in favour of weak institutional arrangements (Sachs and Warner, 2001; Rajan and Zingales, 2006).[1] Despite the persistence of institutional settings, some emerging and developing economies, most notably the former socialist economies in Central and Eastern Europe, have turned out to be better reformers than others. Hoff and Stiglitz (2008) show theoretically that, if internal commitment is not possible, the existence of an external commitment device constrains policy choices and can induces change towards better institutional arrangements. Di Thomasso *et al.* (2007) provide evidence that a membership in the European Union (EU) and the NATO acts as such a commitment device for the formerly socialistic countries in Eastern Europe and has played a key role in a move towards better institutional settings .

This paper studies the effect of regional cooperation agreements (RCAs) on institutional change in a broader context using a sample of 144 emerging and developing economies. I test the effectiveness of over 40 regional policy agreements, ranging from pure technical assistance programmes and regional trade agreements to more binding forms of international cooperation such as defence alliances and supranational EU-type agreements.

The results are as follows. EU and NATO related RCAs have a strong effect on changes in the rule of law in countries in (South) Eastern Europe and Central Asia and are the reason why institutional arrangements are converging towards the ones of industrialised European economies. RCAs in Africa are a reason why institutional arrangements are still poor and hinder African economies to catch up in terms of economic growth, despite some improvements in institutional

[1] Even in cases in which an easy-rents sector does not exist, preferences of individuals about institutions and redistribution may hinder institutional reforms when the income distribution that existed prior the reform does not match the post-reform distribution (Dewatripont and Roland, 1992*a*). Also, political economy models of reform processes emphasise uncertainty, asymmetric information, and adjustment costs to a new set of rules as possible reasons for a lack of institutional reforms (cf. Alesina and Drazen, 1991; Fernandez and Rodrik, 1991; Dewatripont and Roland, 1992*b*).

settings over the last decades. In both cases, the effect is stronger for countries that joined the agreement after its establishment and therefore were not able to bargain over the rule with other member states. In the case of an EU member or an EU potential candidate status, at 2012 levels of institutional quality this is equivalent to, for example, Lativa or Lithuania moving to levels of South Korea or Israel within a year in the case of an EU membership and Morocco improving institutional settings to the levels of Slovakia in the case of an EU potential candidate status. By and large, the results do not show any significant effects of cooperation agreements in Latin American and Asian countries. Although there is some evidence that the newly founded Asian Cooperation Dialogue (ACD) has a positive effect on institutional settings in Asia.

I show that the construction of RCAs is an important transmission channel of how historical factors, such as the colonial history of African economies affect institutional settings today. The mechanism behind the results can be described as follows. European RCAs, such as the EU and the NATO, were founded on the principle cooperation and supranational intervention and, as part of the accession criteria, that countries have to give up sovereignty. The century-long fights over resources within Europe was the main reason for the establishment of the forerunner of the EU. Combined with economic incentives for future member states, such as access to European goods and capital markets provides and incentive for emerging market economies to align their institutional settings with the core EU members. Thus, RCAs can have a disciplining effect on the country's policy agenda and thereby can help to overcome reform inertia even in presence of poor initial conditions. In contrast to this, African RCAs, as well as RCAs in Asia and Latin America were based on the principle of non-intervention. The founding members of African, Latin American, and Asian RCAs are, by and large, former European colonies and the intention behind, for example the African Union and its forerunners, was to re-establish their independence and autonomy from their former colonial rulers. Cooperation among member states was limited to keeping domestic and external influences undermining the independence of each individual state at bay (Kelley, 2010). Non-intervention due to the colonial past of RCAs in those parts of the world hinders the transition towards a better institutional system.

The effect of supranational treaties and membership in intergovernmental organisations on state behaviour is subject to endogeneity and self-selection. The decision to apply for a membership and eventually to join an intergovernmental organisation is subject to ratification of the treaty by the joining country. Focussing on regional agreements, rather than global ones, allows for constructing a synthetic agreement specific instruments that proxy for eligibility for an RCA based on the geographical location of a country and the current member states. The geographical location of a country is a necessary precondition for becoming a member of a regional policy agreement, whereas for membership in a global multilateral organisation it is not. Eligibility requires that certain minimum standards in terms of institutions and other economic factors are met in order to ensure the functionality of the RCA (Alesina *et al.*, 2005). I use those factors to *predict* the geographic location of a country and use the predicted location as an instrument for the membership variables.

The remainder of the paper is as follows. Section 2 discusses the various forms of regional integration and the mechanisms of how these agreements help to overcome the inertia of the reform process. Section 3 describes the estimation strategy and the data set. Section 4 reports the results and tests the validity of the instruments. Section 5 concludes.

2. International Cooperation and Institutional Reforms

Despite the persistence of institutional arrangements, some emerging markets have turned out to be better reformers than others and have improved their institutional quality over the last decades.

Figure 1 compares the distributions of institutional quality in 1996 and 2012 of industrialised countries to the ones in emerging and developing economies in Europe, Asia, Latin America, the Middle East, and Sub-Saharan Africa.[2] Institutional quality is measured by the World Bank's Rule of Law index taken from the *Worldwide Governance Indicators* (WGI) database.[3]

Industrialised countries show a very narrow distribution indicating industrialised economies all have converged to similar levels of institutional quality. In contrast to this, emerging and developing economies in every region of the world show a much larger variation in institutional settings. While still below institutional levels in industrial countries (see bottom right panel Fig. 1), Central Asia and Emerging Europe have shifted to the right, indicating that institutional arrangements have improved in those two regions between 1996 and 2012. In Latin America, the Middle East, East Asia, and the pacific islands, the distributions have moved to the left and thus to a lower level of institutional quality. During the same period, institutions in Sub-Saharan Africa remained at roughly the same levels. Albeit small, in regions where institutions have improved, distributions have also become narrower and countries are converging in terms of institutional quality.

A major difference between the emerging market economies in Europe and the rest of the world is that several countries in Eastern Europe have joined the EU in recent years, or are actively working towards a membership. Even those countries in Eastern Europe that currently do not have (potential) candidate status, still have a prospect of entering the EU at some day. In addition to an EU membership, several former socialist economies in Central and Eastern Europe have joined the NATO in 1999 and 2004 respectively.

While those countries are still below the levels of institutional quality in industrialised Western European economies, a precondition for becoming an EU or a NATO member is that certain economic and legal arrangements are in place and in line with the *Acquis Communitaire* and

[2]The group of industrialised countries consists of Australia, Canada, United States (US), European Union (EU) 15 countries.

[3]The index is a latent factor estimated from over 70 indices measuring the quality of economic institutions. The estimates are normalised on an interval from -2.5 (bad) to 2.5 (good) with the world average set to zero. The WGI Rule of Law index is defined as *"to which extent agents have confidence in and abide by the rules of society, including contract enforcement and property rights, the police, and the courts, as well as the likelihood of crime"* Kaufmann *et al.* (2010). For more information see `http://www.govindicators.org`.

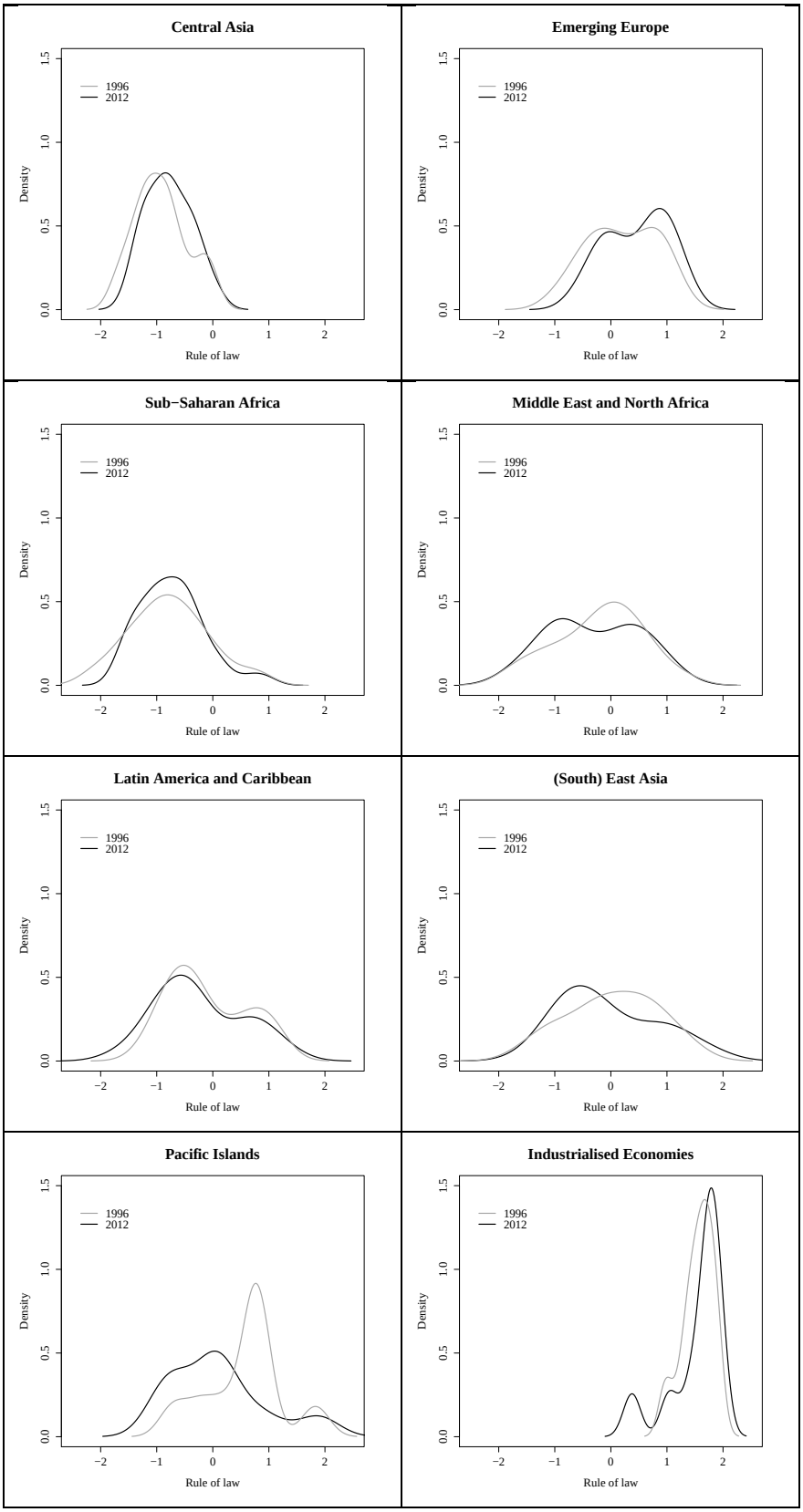

Fig. 1. *Rule of Law by Region*

Notes. The index is standardised on the interval from -2.5 (bad) to 2.5 (good) with the world average set to zero in each year. For detailed information about the country groups, see Table A1 in the Appendix. The group of industrialised countries consist of Australia, Canada, the United States (US), European Union (EU) 15 countries. Regional averages are unweighted averages of the country scores. *Source:* World Bank (2014).

the NATO treaty prior to the accession (European Commission (EC), 2007). As argued by Roland (2001), becoming a prospective EU membership has become an anchor for domestic policy making in several European emerging markets and has imposed important constraints in policy areas such as governance and human rights protection. Because an EU or a NATO membership offers considerable political and economic benefits, such as access to the EU's goods, capital, and labour markets, the EU and the NATO have been able to exert a strong influence on the political reform agenda in applicant states through its entry requirements (Di Thomasso *et al.*, 2007; Grosjean and Senik, 2011).

While there have been several attempts to foster regional integration at the political and socio-economic level in other regions of the world since the 1950s, most attempts remained far less successful than the regional integration approaches in Europe.[4] Regional integration outside Europe only gained momentum after the success of the EU in the 1980s and 1990s and several existing organisations tried to intensify regional cooperation through the declaration of new trade and human rights charters (Mitchell, 2006; Kelley, 2010).[5] Also, several newly founded organisations made institutional standards part of their membership criteria (Democracy Coalition Project, 2001).

One way of how regional policy agreements trigger institutional change and cause convergence in institutional settings among its member states is though acting as a commitment device. Several papers have identified a commitment problem as the fundamental cause why lax institutional arrangements persist, such that winners of institutional reforms cannot credibly commit themselves to compensate the losers (cf. Roland, 2001; Acemoglu, 2003). Even through countries as a whole would benefit from well functioning institutions, politically powerful groups might block institutional reforms and their political enforcement due to the risk of loosing political and economic influence.

When internal commitment is not possible, external factors, such as the existence of a supranational organisation, can act as a commitment device through its membership criteria (Roland and Verdier, 2003; Caruana and Einav, 2008). If joining a regional cooperation agreement is conditional on having certain institutional arrangements in place prior to joining the agreement and the economic and political benefits of the agreement are sufficiently large, the presence of an organisation, such as the EU, can alter the incentive structure of political elites and can help

[4]Examples for such early attempts of regional integration the Association of South East Asian Nations (ASEAN), the Arab League (AL), the Organisation of African Unity (OAU, later the African Union (AU)), the Latin American Free Trade Association (LAFTA), or the Organisation of American States (OAS).

[5]In addition, several new regional cooperation agreements were signed in the 1990s. For example, in 1998 the Arab League (AL) declared a Greater Arab Free Trade Area (GAFTA) in 1998 in which 17 of its 22 member states are currently participating. Similarly, the Gulf Cooperation Council (GCC) has introduced several charters that aim to harmonise regulations in the area of finance, trade, legislation, and administration. Also, the Association of South East Asian Nations (ASEAN) has put forward a single market initiative as well as a human rights charter. Besides that, the ASEAN has also tried to push for further political and economic integration in the region through the foundation of the ACD. At the same time, non-ASEAN members in South Asia, such as India and its neighbours, have started their own experiments with regional integration through the establishment of the South Asian Association for Regional Cooperation (SAARC) or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

to overcome the political commitment problem.

In the case of European emerging markets, the presence of the EU is a reason why economies in Central and Eastern Europe were quite successful in terms of political reforms towards a market economy despite their socialistic heritage.

Even if countries in a certain geographical area are unwilling to become a member of a well functioning regional integration agreement, governments put their business sectors at a competitive disadvantage, if they do not adjust their institutions, as long as other countries pursue a membership (Simmons, 2009). The lack of well functioning institutions can be costly, if direct competitors in the region for foreign direct investment development aid, and trade have better institutions and investors divert cash and trade flows to those countries.

Thus, the regional dynamics of simultaneous change and convergence of economic institutions, at least in the case of European emerging markets, can be explained by the fact that most countries in Eastern Europe have a (potential) candidate status or are working towards a candidate status for an for an EU membership, even though some countries do not.

A second precondition for a supranational organisation to being able to affect institutional arrangements is, besides setting entry requirements, its member states' willingness to give up some of their sovereignty.

When setting up regional cooperation agreements, preferences of the founding members about institutions and independence will be reflected in the membership rules and requirements for entry (Alesina *et al.*, 2005). Preferences over interference and sovereignty are reflected in the organisation's decision making process.

Non-interference and the loss of sovereignty had a low priority in the establishment of European supranational organisations. Establishment was rather driven by the threat of the communist East and a desire to avoid rouge state behaviour that had led to the rise of Nazi Germany and World War II by sharing resources and committing each other to democracy and human rights (Baldwin, 2010). European economies have had a shock two world wars that made the costs of giving up sovereignty seem negligible compared to the gains of cooperation. The fear of war and rogue states' behaviour opened a window of opportunity to set up strong and binding rules for regional integration. In the case of Eastern Europe, after decades of communist rule the desire of these newly independent states to avoid a repeat of this oppressive past made the costs of loosing some of their sovereignty by joining the EU and the NATO negligible given the benefits from accessing European goods and capital markets (Elsig and Milewicz, 2012).

The EU with its Commission has the power to enforce changes in domestic law, whereas most regional organisations in other parts of the world have maintained strong consensus-based rules, giving each member state a *de facto* veto possibility and therefore makes it very difficult to enforce institutional improvements in its member states especially changes that potentially empowers their citizens against the state (Simmons, 2000, 2009).[6]

[6]Note that, for example, the OSCE only changed it's decision making process to "consensus minus one" in order to suspend the Federal Republic of Yugoslavia (FYR) after the FYR violated its OSCE commitments by

Supranational organisations in Africa, Asia, and Latin America founded after World War II were based on the concept of internal non-interference. Several countries in those regions are former colonies of European countries. Thus, the main focus was to re-establish their independence and sovereignty from the former colonists. The fear of intrusion has hampered regional integration in other regions of the world as has been observed in, for example, the functioning of the African Union, the Arab League, and the ASEAN (Kelley, 2010; Elsig and Milewicz, 2012).

3. Data, Estimation, and Identification

3.1. *Data and the Econometric Model*

The sample used for estimation is a balanced panel of 144 emerging and developing economies from 1996 to 2012.[7] The choice of the agreements used for estimation is based on importance and on having a sufficient degree of variation in terms of member and non-member states within a region and duration of membership in order to identify the effect of an RCA membership on institutional change.[8]

As a proxy for the quality of economic institutions, the World Bank's WGI Rule of Law index is used.

As institutions are very persistent over time, the focus is on the cross sectional variation in the data. The baseline model has the form

$$q_{i2012} = \beta_0 + \beta_1 q_{i1996} + \beta_2 r_{ij} + \varepsilon_i, \quad \text{for each} \quad j \in J, \tag{1}$$

$$r_{ij} = \alpha_0 + \alpha_1 q_{i1996} + \alpha_2 g_{ij} + \upsilon_i, \tag{2}$$

where q_{i2012} and q_{i1996} represent the quality of economic institutions in country i in 2012 and 1996 respectively and r_{ij} indicates whether country i is a member of a particular agreement j or not. r_{ij} is the time spent in years as a member under a particular agreement j. Since the dependent variable is a normalised index, r_{ij} is normalised on the interval $[0, 1]$ with 1 having spent the entire observation period as a member of the RCA. Institutional quality at the beginning of the sample is added in order to control for any developments prior to the beginning of the sample and to account for the persistence of economic institutions. ε_i and υ_i are jointly normal distributed error terms with a heteroscedastic variance-covariance matrix of the form

$$\begin{pmatrix} \varepsilon_i \\ \upsilon_i \end{pmatrix} \sim N(0, \mathbf{\Sigma_i}), \text{ with } \mathbf{\Sigma_i} = \begin{pmatrix} \sigma_{i\varepsilon\varepsilon} & \sigma_{i\varepsilon\upsilon} \\ \sigma_{i\upsilon\varepsilon} & \sigma_{i\upsilon\upsilon} \end{pmatrix}, \tag{3}$$

attacking Bosnia and Herzegovina.

[7] The countries used for estimation are listed in Table A1 in the Appendix.

[8] Table A2 in the Appendix provides a complete list of the agreements tested. Results are estimated for more than 40 regional agreements. However, several of them where dropped due to the instrument being not sufficiently strong.

where $\sigma_{\varepsilon\varepsilon}$ and $\sigma_{\upsilon\upsilon}$ as the variances of ε and υ respectively and $\sigma_{\varepsilon\upsilon}$ and $\sigma_{\upsilon\varepsilon}$ as the covariances between ε and υ respectively.

g_{ij} is an instrumental variable satisfying

$$E(g_{ij}, \varepsilon_i) = 0, \quad \forall i, j, \tag{4}$$

3.2. *Construction of the Instrument*

Becoming a member of a RCA is subject to exogenous and endogenous elements. Especially in cases where a certain level of economic institutions and economic development is part of the membership criteria, a higher level of institutional quality will make it more likely for a country to be eligible and apply for an RCA membership. Or, countries might conduct institutional reforms prior to joining an RCA in order to become eligible.

In order to estimate the causal effect of being a member of a RCA on institutional change, I construct agreement specific instruments that proxy for the *eligibility* for a RCA by predicting a country's location in a region, conditional on other factors that would make a country more eligible join. The geographic location of a country can be seen as a necessary but not sufficient condition for joining an RCA. Eligibility for a RCA, depends on the geographic location of a country but also on how similar a country is with respect to the current member states in terms of other criteria. *Closeness* of potential and current member states in terms of economic development and preferences over policies is equally important for becoming a member in a RCA. Moreover, countries have to have the capacity to implement the organisational and institutional commitments required by being a member (Kelley, 2010).[9] While the location of a country is strictly exogenous, several other factors related to the eligibility of a country, such as GDP, trade relationships, and climatic factors, are strongly correlated with the geographical location as well as with the quality of economic institutions. Removing the correlation between the exogenous geographic location and other factors correlated with geography and institutional change allows one to *predict* the geographic location of each country conditional on these factors and thereby construct a plausibly exogenous instrument that proxies for the (geographic) eligibility in an RCA.[10]

For each of the j agreements, the location of a country is predicted using an auxiliary regression on the entire sample from 1996–2012 of the form

$$\mathbf{g}_j = \mathbf{X}_j\theta_j + \nu_j, \quad \text{for each } j \in J, \tag{5}$$

[9] Alesina *et al.* (2005) show in a theoretical model in which a group of countries decide to jointly provide a public good, such as external security or environmental quality, that the member states' heterogeneity in terms of preferences and their ability to implement the rules of the agreement have a strong impact on the overall functioning of the union and the provision of the good and makes the provision of the good more effective.

[10] The construction of the instrument is similar to the instrumental variable (IV) strategy used by Alesina and Zhuravskaya (2011) who investigate the effect of internal ethnolinguistic fragmentation within countries on the probability of cooperation between two neighbouring countries by using predicted segregation and location of ethnolinguistic groups as an instrument for actual segregation.

where $\mathbf{g}_j$ is an $NT \times 1$ vector of dummy variables whose elements take on the value 1 if country i is located in a region that makes the country geographically eligible for agreement j and zero otherwise. $\mathbf{X}_j$ is a $NT \times k$ matrix containing the k factors that predict regional closeness with respect to the current/other member states. θ_j is a $k \times 1$ vector of coefficients and ν_j is is an $NT \times 1$ vector of residuals.

Geographic eligibility ($\mathbf{g}$) for a RCA and other membership criteria are typically outlined in the initial treaty documents of a RCA, even when geographical boundaries are vague. In the simplest case, geographic eligibility of a country is determined by a being located in a certain world region, i.e. being generally eligible for becoming a member of the AU requires a country to be located on the African continent. Similarly, no state has ever joined the EU without first joining the Council of Europe.[11] Thus, a Council of Europe membership defines geographical eligibility.[12]

Economic homogeneity from the median member state is an important criterion for the eligibility of becoming a member. Only countries close enough to the median of the pre-existing union are accepted in order to ensure the functionality of the union. While there are clearly outlined accession criteria in the case of the EU or the NATO, most other regional agreements do not have a clearly defined accession process and membership criteria for aspiring member states. Other factors which may not explicitly be part of an agreement's membership criteria might also be directly or indirectly related to geographic and economic or political eligibility and the quality of economic institutions in a country. Trade and financial openness may be correlated with institutional change as countries with a large share of (potential) revenues from trade per GDP or a large share of foreign investment in total investment face opportunity costs in terms of forgone business opportunities as a result of bad governance. Similarly, factors, such as ethnolinguistic fractionalisation, climate, and historical factors are well documented correlates with both, geography and institutions (Acemoglu *et al.*, 2001; Alesina and Zhuravskaya, 2011). Thus, $\mathbf{X}_j$ is allowed to contain a wide range of factors in order to get the most precise estimate of the predicted region of a country.

To capture how much a country differs from the current member states, $\mathbf{X}_j$ contains ratios of each variable over the median level of the variable for the current member states for each agreement j at each point in time t, such that each element in $\mathbf{X}$ is given by

$$x_{ijt} = \frac{x_{it}}{\widetilde{x}_{jt}}, \tag{6}$$

where $\widetilde{x}_{jt}$ is the median of the variable of the current members of the RCA at time t and

[11] Regardless of, for example, the controversy about whether Turkey should become an EU member or not among the current EU member states, Turkey is a recognised EU candidate country, despite most of Turkey's land mass is on the Asian continent. Similarly, some Central Asian economies, such as the Ukraine, have shown a desire to move closer towards the EU economically and politically. Thus, in the long run, the EU might expand further eastwards and include Central Asian economies as well.

[12] Table A2 in the Appendix shows the geographical definition used for the construction of the instrument for each of the agreements tested in the next Section.

x_{ijt} is the country's realisation of the same variable.

The main variables considered in $\mathbf{X}$ are ratios of institutional quality real GDP and GDP per capita, population, inflation, temperature, rainfall, and ethnic, religious and linguistic fractionalisation. In addition, $\mathbf{X}$ is augmented by information on the colonial and legal origin of countries, as well as trade openness, foreign debt, and external borrowing as a share of GDP.

Depending on the RCA, the construction of the medians $\widetilde{x}_{jt}$ of the elements in $\mathbf{X}$ is as follows. In the case of a pre-existing agreements, $\widetilde{x}_{jt}$ is constructed with respect to the current member states. In the case of agreements with a structured accession process or different layers of memberships, $\widetilde{x}_{jt}$ is constructed with respect to the current accession states for non-member countries, and with respect to current member states for accession countries. For example, if a country is a member of the Council of Europe and thus eligible for an EU potential candidate status, x_{ijt} is the ratio of country is, for example, GDP and the median of the variable of the current potential candidates. Having potential candidate status makes countries eligible for an actual candidate candidate status. Thus, x_{ijt} is constructed from the realisation of the variable in country i and the current candidate countries, and so on.

In the case of newly formed RCAs, the the medians $\widetilde{x}_{jt}$ are constructed with respect to all the other states involved in the setting up the agreement. While in the case of a newly formed RCA, $\widetilde{x}_{jt}$ will not be exogenous to country i "closeness" of the founding member states still carries important information with regard to the eligibility and the functionality of the RCA. Thu, the medians of the founding members are used. By definition, all Δx_{ijt} are zero prior to the establishment of the agreement.

Data for GDP, GDP per capita, population, inflation, and net-borrowing are taken from the IMF's *World Economic Outlook* database. Total GDP and GDP per capita are measured in purchasing power units. Trade and climate data are taken from the World Bank's United Nation's *UNCTAD* database and the *World Development Indicators*. Data on ethnic, religious and linguistic fractionalisation are taken from Alesina *et al.* (2003). The data on the colonial and legal origin of countries are taken from Hadenius and Teorell (2005) and La Porta *et al.* (2008) respectively. Data on general government debt is taken from the IMF's *Historical Debt database* compiled by Abbas *et al.* (2010). Table A3 in the Appendix provides a more detailed description of the variables used and the data sources.

In order to account for potential non-linearities among the correlations between $\mathbf{g}_j$ and the elements of $\mathbf{X}_j$, quadratic terms of the variables are added when estimating Eq. 5. As some variables listed above in $\mathbf{X}$ turn out to be poor predictors of $\mathbf{g}$, those variables and their quadratic terms are dropped on a case-by-case basis. The exact specification of Eq. 5 for each $\mathbf{g}_j$ is selected by maximising the F-statistic of Eq. 5. Table A4 in the Appendix provides a detailed list of the final specifications used for predicting $\mathbf{g}_j$.

Since the focus is on the cross-sectional variation in the data, timely averages of the predicted values $\widehat{g}_{ijt}$ of Eq. 5 for each agreement j from 1996–2012 are constructed and used for the estimation of the model in Eqs. 1 and 2, such that g in Eq. 2 is replaced by

$$\bar{g}_{ij} = \frac{1}{16} \sum_{t=1996}^{2012} \widehat{g}_{ijt}. \tag{7}$$

The key identifying assumption for estimating the coefficient on the RCA membership variable above is that eligibility for a membership can affect the rule of law in a country only through becoming a member. There is little concern that the exclusion restriction is violated through correlation with observable macroeconomic variables since, by construction, the instrument is uncorrelated with other correlates of q. The instrument can also be reasonably assumed to be uncorrelated with unobservable country characteristics unless those are uncorrelated with any of the variables in Eq. 5. A slightly bigger concern is that, for example, being eligible for an EU candidate status, makes a country equally likely to be eligible for becoming a NATO candidate country. Thus, $\bar{g}_j$ might be correlated with the error term in the second stage equation through correlation with other agreements due to the overlap of geographical eligibility and the overlap in the group of current member states. Section 4.2 specifically tests for the potential violations of the exclusion restriction through overlapping agreements and in a more general way.

4. Estimation Results

The model described in Eqs. 1 and 2 is estimated using two stage least squares (2SLS). In order to deal with the problem of a generated instrument (Pagan, 1984, 1986) bootstrapped standard errors clustered at the country level with 500 replications are used. The general estimation strategy is as follows. First, the effect of the various agreements in each region is estimated for the entire sample. Second, since most agreements in the sample, such as the AU or the AL, do not have a structured accession process and the founding members have a chance to bargain over the rules of the RCA, I test the robustness of the results for those RCAs by focussing on countries who joined after the establishment of the RCA.

There are two concerns regarding the estimation strategy. First, the rule of law indicator used as dependent variable is standardised to have a zero mean and unit standard deviation in each period such comparisons over time are difficult. Second, the constructed instrument might violate the exclusion restriction of the two stage estimator. Regarding the first point, Kaufmann *et al.* (2010) document that there is no evidence of significant trends in world averages of the governance indicators. Thus changes in the WGI data at the country level can be interpreted as absolute changes. In addition, the variables in the model are also standardised given that the dependent variable is a "metric-free" indicator with mean zero and a one unit standard deviation. The validity of the instrument is tested in Section 4.2.

4.1. *IV Estimates*

The estimation results are grouped by regions. Table 1 shows the 2SLS estimates of the effect of being a member of a European RCA on institutional change. Standard errors are reported

in parentheses. In all regressions in Table 1, the Stock and Yogo (SY, 2005) test statistic shows that the constructed instruments are sufficiently strong.

Table 1 shows that all EU-related agreements, with the exception of the being a member of the EMU, are significant at the 1 %-level and show a positive relationship between being a member of an EU. The coefficients for being an EU member or being an EU (potential) candidate country range from 1.7761–5.0849. Thus, spending an additional year as an EU member or an EU potential candidate improves institutional quality by 0.12 and 0.32 respectively given the indexed variable measuring the time spent under the agreement. At 2012 levels of institutional quality this is equivalent to, for example, Lativa or Lithuania moving to levels of South Korea or Israel within a year in the case of an EU membership and Morocco improving institutional settings to the levels of Slovakia in the case of an EU potential candidate status.

Similarly, being a NATO member or having a NATO Membership Action Plan (MAP) are both significant at the 5 and 1 %-level of significance respectively. Similar to the EU-centred accession programmes, being a member of the NATO MAP has a stronger effect on institutional quality than the agreement itself. In addition, the Central European Free Trade Area (CEFTA) is also significant at the 1 %-level with an equally strong effect on institutional change as being an EU member or an EU candidate country.

Table 1
RCA Membership and the Rule of Law (Emerging Europe)

Dependent variable: Rule of law 2012							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rule of law 1996	0.6785***	0.7088***	0.7374***	0.7609***	0.7509***	0.7935***	0.7591***
	(0.0524)	(0.0591)	(0.0519)	(0.0538)	(0.0553)	(0.0483)	(0.0522)
EMU member	8.2077						
	(7.9256)						
EU member		1.7761**					
		(0.6940)					
EU candidate			1.9803***				
			(0.7000)				
EU potential candidate				5.0849***			
				(1.5339)			
NATO member					1.1272***		
					(0.3933)		
NATO MAP						2.6622***	
						(0.8709)	
CEFTA							1.8244**
							(0.7892)
Constant	-0.1996***	-0.1900***	-0.1924***	-0.2050***	-0.1622***	-0.1657***	-0.1742***
	(0.0456)	(0.0495)	(0.0512)	(0.0477)	(0.0490)	(0.0418)	(0.0446)
Observations	144	144	144	144	144	144	144
SY-Test	44.55	52.97	29.57	33.06	43.45	60.69	45.01

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005).

Table 2 shows the results for being a member of a RCA in Central Asia. Although weaker than in Europe, NATO-based agreements, rather than EU-based agreements have a significant positive effect on the rule of law in Central Asia. Albeit small, the marginal effects for being

a member of either the NATO Partnership for Peace (PfP) or the Euro-Atlantic Partnership Council (EAPC) is 0.3135 and 0.3184 respectively, implying that the rule of law score improves by 0.02 for an additional year under the agreement. On the other hand, having a Individual Partnership Action Plan (IPAP) with the NATO has no significant effect on the rule of law in Central Asia. Being a member of an OSCE-programme also shows a positive effect on institutional change. On the other hand, the Russia and China-led agreements in Central Asia, such as the Shanghai Cooperation Organisation (SCO), the Collective Security Treaty Organisation (CSTO), or the Commonwealth of Independent States (CIS) have no effect on institutional change. The first column in Table 2 indicates that the EU Technical Aid for the Commonwealth of Independent States (TACIS) has no significant effect on institutional change in Central Asian countries.

Table 2
RCA Membership and the Rule of Law (Central Asia)

Dependent variable: Rule of law 2012								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rule of law 1996	0.8335***	0.8658***	0.8291***	0.8101***	0.8066***	0.8316***	0.8162***	0.8277***
	(0.0497)	(0.0531)	(0.0450)	(0.0470)	(0.0422)	(0.0570)	(0.0481)	(0.0476)
EU TACIS	0.4076							
	(0.3612)							
NATO IPAP		3.6729						
		(4.0302)						
NATO PfP			0.3135*					
			(0.1727)					
NATO EAPC				0.3184***				
				(0.1163)				
OSCE					0.3316***			
					(0.1116)			
SCO						0.4893		
						(1.6233)		
CSTO							0.1104	
							(0.3304)	
CIS								0.2239
								(0.2240)
Constant	-0.0988***	-0.1250***	-0.1172***	-0.1435***	-0.1487***	-0.0955**	-0.0865**	-0.0942**
	(0.0370)	(0.0388)	(0.0378)	(0.0428)	(0.0424)	(0.0379)	(0.0381)	(0.0377)
Observations	144	144	144	144	144	144	144	144
SY-Test	202.3	17.02	191.9	394.0	229.5	58.32	110.4	144.8

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005).

Table 3 reports the results for being a member of the AU and being a member of one of the various sub-agreements of the AU. The first column in Table 3 shows that being a member of the AU has a significant effect on institutional quality in Africa. With a marginal effect of -0.5187, being a member of the AU reduces institutional quality by -0.032 for additional year under the agreement. Being a member of the Economic Community Of West African States (ECOWAS) does not have a significant effect on institutional quality. Being a member of either the Community of Sahel-Saharan States (CEN-SAD) or a member of the Common Market for Eastern and Southern Africa (COMESA), however, does have significant on institutional quality

in its member states. Both coefficients are significant at the 5 %-level and show a negative effect on the rule of law in 2012. Being a member of the COMESA reduces the level of institutional quality by -0.065 for each additional year and spending an additional year as a member of the COMESA reduces the rule of law score by -0.037. Both have a stronger effect on the rule of law in African countries then an AU membership. On the other hand, being a member of the Southern African Development Community (SADC) or the West African Monetary Union (UEMOA) does not have a significant effect on institutional change in its member states.

Table 3
RCA Membership and the Rule of Law (Sub Saharan Africa)

Dependent variable: Rule of law 2012							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rule of law 1996	0.7363***	0.7735***	0.7597***	0.7430***	0.8116***	0.7773***	0.7922***
	(0.0564)	(0.0571)	(0.0530)	(0.0581)	(0.0465)	(0.0536)	(0.0470)
AU	-0.5187**						
	(0.2032)						
ECOWAS		-0.3757					
		(0.2319)					
CEN-SAD			-0.5922**				
			(0.2482)				
COMESA				-1.0450**			
				(0.4475)			
SADC					0.1626		
					(0.1887)		
ECCAS						-0.3072	
						(0.4239)	
UEMOA							-0.4187
							(0.3427)
Constant	-0.0013	-0.0578	-0.0322	0.0241	-0.0990**	-0.0745**	-0.0658
	(0.0507)	(0.0392)	(0.0446)	(0.0590)	(0.0448)	(0.0379)	(0.0411)
Observations	144	144	144	144	144	144	144
SY-Test	68.42	76.80	73.26	25.96	64.86	66.15	67.80

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005).

While some countries in Northern Africa are already covered by the agreements in Table 3, there are several agreements that were specifically founded by the Arab countries in Northern Africa and the Middle East. Most of these agreements are not based on the geographic location rather than on ethnicity, religion or natural resources, such as the AL, the Organisation for Islamic Cooperation (OIC), or the Organisation of Petroleum Exporting Countries (OPEC). While, for example, the AL and the OPEC by and large consist of Middle Eastern countries, by definition membership in these two organisations are open to any oil-exporting country or predominantly Muslim country in the world. In the case of these quasi-regional agreements, a judgement call is made and the region variable g in Eq. 5 used for constructing the instrument is replaced by the share of Muslims in each country in the case of the AL and the OIC, and the share of petroleum-based exports as a share of total exports in the case of the OPEC. The data for the share of Muslims in each country as well as the share of petroleum-based exports are taken from the Word Bank's *World Development Indicators*.

Table 4 shows that none of the RCAs in the MENA region have a significant effect on institutional quality. Neither agreements that were set up by the countries in the region nor agreements that were facilitated by the EU or the NATO, such as the EU Mediterranean Partnership (EU MED) or the NATO Mediterranean Dialogue (NATO MED) appear to have an effect on rule of law in the region.

Table 4
RCA Membership and the Rule of Law (Middle East and North Africa)

Dependent variable: Rule of law 2012							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rule of law 1996	0.8154***	0.8150***	0.7874***	0.8084***	0.8142***	0.7793***	0.8136***
	(0.0461)	(0.0445)	(0.0453)	(0.0451)	(0.0458)	(0.0562)	(0.0485)
AL	-0.1770						
	(0.2026)						
GAFTA		-0.1127					
		(0.2237)					
GCC			0.4769				
			(0.2943)				
EU MED				0.0566			
				(0.2606)			
NATO MED					-0.1366		
					(0.4975)		
OIC						-0.1875	
						(0.1526)	
OPEC							0.1171
							(0.3098)
Constant	-0.0605	-0.0710*	-0.1103***	-0.0871*	-0.0753*	-0.0260	-0.0913**
	(0.0437)	(0.0427)	(0.0409)	(0.0446)	(0.0401)	(0.0553)	(0.0437)
Observations	144	144	144	144	144	144	144
SY-Test	89.55	77.47	198.2	72.85	74.57	65.84	55.32

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005).

Table 5 shows that none of the East Asian RCAs have a significant effect on the rule of law in the region besides the ACD. The first two columns show that an ASEAN membership has no significant effect on institutional quality for East Asian countries. In contrast to this, the ACD appears to have a positive effect on institutional change in East Asia. Joining the ACD increases the quality of institutions by 0.034. All remaining agreements in Table 5 do not have any effect on institutional change.

Table 6 shows a similar scenario as the results for the MENA countries in Table 4. None of the agreements in Latin America have a significant effect on institutional change in Latin America.

4.2. *Validity of the Instruments*

The results in Section 4.1 appear to be robust to weak identification, since the SY-test statistic in all regressions in Section 4.1 is sufficiently large. On the other hand, the fact that several of the agreements tested in the previous Section geographically overlap might cause a violation of the exclusion restriction of the instrument due to the correlation between the constructed

Table 5
RCA Membership and the Rule of Law (East Asia)

Dependent variable: Rule of law 2012						
	(1)	(2)	(3)	(4)	(5)	(6)
Rule of law 1996	0.8137***	0.8156***	0.7995***	0.8080***	0.8094***	0.8147***
	(0.0470)	(0.0469)	(0.0492)	(0.0466)	(0.0486)	(0.0501)
ASEAN	-0.4267					
	(0.4338)					
ASEAN+3		-0.2888				
		(0.3098)				
ACD			0.5502*			
			(0.3094)			
SAARC				-0.2607		
				(0.8223)		
SAFTA					-0.2719	
					(0.6794)	
BIMSTEC						-0.6186
						(1.3022)
Constant	-0.0561	-0.0600	-0.1481***	-0.0711*	-0.0779*	-0.0533
	(0.0437)	(0.0430)	(0.0494)	(0.0419)	(0.0413)	(0.0561)
Observations	144	144	144	144	144	144
SY-Test	38.57	40.33	58.47	51.91	73.30	32.66

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005).

instruments for overlapping agreements. While there is a variation in the duration in membership and countries have joined these overlapping agreements at different times, the group of countries currently being NATO members overlaps with the member states of the EU. Also, several countries that currently have an EU candidate status are also part of the NATO MAP, and so on.

This section provides an indirect test of the exclusion restriction for each of the models of Section 4.2 by using a Hausman-type test of the validity of the exclusion restriction developed by Hahn *et al.* (2011).[13] The test is an overidentification test under the assumption of having one instrument (w) which is credibly exogenous but is only weakly correlated with the endogenous variable and one strong instrument (s) that has more explanatory power but which might not be exogenous, such that the exclusion restriction might not hold. Under the null, the test is χ^2 distributed with 1 degree of freedom with $H_0 : E(s_i\varepsilon_i) = 0$ against the alternative that $H_1 : E(s_i\varepsilon_i) \neq 0$. Thus, a rejection of the null hypothesis puts doubt on the validity of the original instrument used for a particular RCA.

The test is constructed as follows. For each RCA, an additional instrument from the set of other constructed instruments is chosen that is weakly correlated with the RCA of interest and can be assumed to be uncorrelated with the error term in the second stage equation. The additional instruments is chosen such that the w is (a) geographically very remote from the tested RCA and (b) picked from a group whose average rule of law score is different from the one in the test and thus, can be assumed to be weakly correlated with the RCA of interest with

[13] Appendix C provides additional evidence for the validity of the exclusion restriction based on the modified 2SLS estimator by Conley *et al.* (2012).

Table 6
RCA Membership and the Rule of Law (Latin America and Carribean)

Dependent variable: Rule of law 2012						
	(1)	(2)	(3)	(4)	(5)	(6)
Rule of law 1996	0.8124***	0.8183***	0.8056***	0.8104***	0.8075***	0.8283***
	(0.0964)	(0.0469)	(0.0464)	(0.0474)	(0.0480)	(0.0466)
MERCOSUR	-0.2890					
	(15.0211)					
MERCOSUR 7		-0.3760				
		(0.4174)				
IAS			-0.4231			
			(0.2905)			
ALADI				-0.2870		
				(0.2186)		
Rio Group					-0.3967	
					(0.2735)	
CARICOM						-0.2793
						(0.4061)
Constant	-0.0743	-0.0629	-0.0346	-0.0608	-0.0319	-0.0597
	(0.3812)	(0.0447)	(0.0518)	(0.0446)	(0.0529)	(0.0461)
Observations	144	144	144	144	144	144
SY-Test	30.55	69.48	28.07	130.7	28.75	36.41

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005).

the error term in the second stage.

For European-based agreements, the instrument constructed for the African-based ECOWAS is chosen. For Central Asian RCAs, the MERCOSUR instrument is used. For African agreements, the IAS instrument is chosen. For RCAs in the MENA region and in South East Asia, the CIS and the SADC instrument is selected respectively. For agreements in Latin America, the choice is the ASEAN instrument.

Table 7 shows the results for the re-estimated models using the additional instrument and the results for the validity of the original instrument. For brevity, only the coefficients of interest are reported. The first two columns show the coefficients and the standard errors. The third column shows the standard SY-test of the first stage and the fourth column reports the Hausman test of the instrument. In addition, the last column in Table 7 reports the p-values of the standard Sargan test for overidentification for the re-estimated models.

Apart from a few exceptions, such as the NATO IPAP, the SY-statistic indicates that the two instruments are jointly sufficiently strong. The coefficients in Table 7 are qualitatively the similar to the ones in the previous section. Only in the case of the Gulf Cooperation Council (GCC), the coefficient in Table 7 is significant at the 10 %-level.

In all cases in Table 7, the null of the Hausman test cannot be rejected. Thus, the original instrument appears to be credibly exogenous. Although the Sargan test does not have the correct distribution under the null in the presence of weak instruments, the Sargan tests in the fifth column of Table 7 confirms the result of the Hausman tests, indicating that the models are not overidentified.

Table 7

Overidentification Tests

	Coefficient	Standard error	SY-Test	Hausman Test	Sargan Test (p-value)
Emerging Europe					
EMU member	8.2697	9.6741	22.2052	0.3699	0.5277
EU member	1.7048***	0.5802	27.9717	0.4158	0.4632
EU candidate	1.9844**	0.7636	15.6064	0.0007	0.9755
EU potential candidate	4.9656***	1.4503	16.7980	0.2874	0.4852
NATO member	1.1086**	0.4378	21.6797	0.3794	0.4333
NATO MAP	2.6610***	0.9155	30.1410	0.0088	0.8869
CEFTA	1.8186**	0.7130	22.5114	0.0248	0.8837
Additional instrument:			$\bar{g}_{\text{ECOWAS}}$		
Central Asia					
EU TACIS	0.4071	0.3168	100.4371	0.0007	0.7127
NATO IPAP	3.5961	4.6418	8.9713	0.0208	0.8091
NATO PFP	0.3145*	0.1595	95.3543	0.0069	0.7421
NATO EAPC	0.3196***	0.1058	196.9202	0.0007	0.7583
OSCE	0.3329***	0.1100	114.4217	0.0005	0.7538
SCO	0.5258	1.3987	30.8742	0.5231	0.6061
CSTO	0.1115	0.3029	54.8260	0.0001	0.5739
CIS	0.2236	0.2321	71.8729	0.0001	0.6508
Additional instrument:			$\bar{g}_{\text{MERCOSUR}}$		
Sub-Saharan Africa					
AU	-0.5049**	0.2108	34.0115	0.0002	0.0392
ECOWAS	-0.3768	0.2327	38.1270	0.8914	0.0984
CEN-SAD	-0.4846**	0.2420	38.6704	0.3380	0.0171
COMESA	-0.9209**	0.3916	13.7523	0.0520	0.0919
SADC	0.1425	0.1714	32.3911	0.0132	0.1161
ECCAS	-0.3066	0.6037	32.8414	0.0225	0.1125
UEMOA	-0.3489	0.3692	34.6997	0.0008	0.0619
Additional instrument:			$\bar{g}_{\text{IAS}}$		
Middle East and North Africa					
AL	-0.1970	0.2153	45.6499	0.8256	0.3465
GAFTA	-0.1249	0.2368	38.6451	0.9589	0.2785
GCC	0.4876*	0.2926	98.6860	1.5524	0.1459
EU MED	0.0257	0.2554	36.7225	0.0065	0.2306
NATO MED	-0.1669	0.3161	37.6030	0.8232	0.2699
OIC	-0.2010	0.1417	33.2517	0.0023	0.3411
OPEC	0.0769	0.3250	28.1258	1.3952	0.1987
Additional instrument:			$\bar{g}_{\text{CIS}}$		
(South) East Asia					
ASEAN	-0.4247	0.5131	19.1516	0.0083	0.5280
ASEAN+3	-0.2802	0.3594	20.0768	0.0036	0.4912
ACD	0.4438*	0.2663	31.5685	1.2258	0.1018
SAARC	-0.2675	0.9976	25.8124	0.0009	0.5148
SAFTA	-0.3242	1.1360	37.0766	0.0020	0.4592
BIMSTEC	0.6327	1.7522	16.3728	0.0141	0.6803
Additional instrument:			$\bar{g}_{\text{SADC}}$		
Latin America and Caribbean					
MERCOSUR	-0.3581	2.9468	15.3734	0.7647	0.1800
MERCOSUR 7	-0.3088	0.3888	35.5680	0.0106	0.1145
IAS	-0.2353	0.2372	20.5606	1.2766	0.1516
ALADI	-0.2813	0.2335	64.9262	0.0074	0.1338
Rio Group	-0.2128	0.2303	21.5573	0.2037	0.1459
CARICOM	-0.1283	0.3339	21.0963	0.0181	0.1512
Additional instrument:			$\bar{g}_{\text{ASEAN}}$		

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005). Hausman test refers to the instrument validity test by Hahn *et al.* (2011).

4.3. *Robustness Checks*

Another difference between RCAs such as the EU and the NATO and RCAs in the rest of the world is that (a) both, the NATO and the EU, have a structured accession process, and (b) the countries in the sample joined those two RCAs long after their establishment. Countries in Emerging Europe had no chance to renegotiate the rules of the agreement. In the case of RCAs in the rest of the world, countries in the sample were often the founding members of the agreement and are able to influence the rules according to their needs. Thus the rules might be less constraining as in the case of countries joining the RCA after its establishment.

This section investigates whether the effect of RCAs on institutional quality differs for founding members and for countries that joined the agreement at a later stage. The model is similar to the IV-estimator with endogenous interaction terms proposed by Rajan and Zingales (1998). The revised model has the form

$$q_{i2012} = \beta_0 + \beta_1 q_{i1996} + \beta_2 r_{ij} + \beta_4 r_{ij} \cdot late_{ij} + \varepsilon_i, \quad \text{for each} \quad j \in J, \tag{8}$$

$$r_{ij} = \alpha_0 + \alpha_1 q_{i1996} + \alpha_3 \bar{g}_{ij} + \upsilon_i, \tag{9}$$

where $late_{ij}$ is a dummy that is 1 if country i joined the RCA j after its establishment, and zero otherwise. The estimation is restricted to cases where a substantial number of countries have joined the RCA during the sample period in order to avoid collinearity issues between r_{ij} and the interaction term.

Tables 8 – 12 show the results the effects for late-joiners of the RCAs in Central Asia, MENA, Sub-Saharan Africa, East Asia, and Latin America.

Table 8 shows that, in both cases, the NATO IPAP and the NATO PfP, the coefficients for the membership variables are very similar to the ones estimated in Section 4.1. In the case of the NATO IPAP, the membership effect for all members is significant at the 10 %-level. With a coefficient of 3.1768, an additional year increases the rule of law index by 0.2. In addition, the joined F-test of the membership variable and the interaction term at the bottom of Table 8 shows an additional effect for late comers of 0.4967, such that the overall effect for late-joiners is 0.23. In contrast to this, the NATO PfP does not have a significant effect neither for founding members nor for late-joiners.

Table 9 shows the results for late-joiners in the case of Middle Eastern and North African countries. Similar to the results in Section 4.1, the coefficients for the EU MED and the OPEC are all insignificant, suggesting no effect on institutional change on countries in the MENA region. The coefficient for the OIC, however, becomes statistically significant at the 10 %-level when adding the interaction term for late-comers of the agreement. The effect of the OIC for all members is -0.2818, such that the effect on the rule of law is -0.02. The joined F-test of the OIC variable and the interaction term shows that there is a positive effect effect of joining late

Table 8
Late-Comers in Central Asia

Dependent variable: Rule of law 2012		
	(1)	(2)
Rule of law 1996	0.8658***	0.8291
	(0.0472)	(16.3432)
NATO IPAP	3.1768**	
	(1.5360)	
NATO IPAP * *late*	0.4967	
	(0.5462)	
NATO PfP		0.3150
		(0.2157)
NATO PfP * *late*		-0.0073
		(1,608.0238)
Constant	-0.1250***	-0.1172
	(0.0381)	(15.9905)
Observations	144	144
SY-Test ($\bar{g}$)	10.17	100.15
SY-Test ($\bar{g} \cdot late$)	569.23	206.10
F-Test (p-value)	0.031	0.344

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005). F-test (p-value) tests for joint significance of the RCA coefficient and the interaction term.

of 0.2361. Thus, the overall effect for late-comers is virtually zero as suggested by the estimate in Section 4.1..

Table 10 reports the results for late-joiners in Africa. All coefficients in Table 10 are similar to the ones in Section 4.1. Being a member of the CEN-SAD or the COMESA shows a negative effect, significant at the 5 and 1 %-level respectively. The joined F-tests at the bottom of Table 10 show that the membership effect differs for late comers. In the case of the CEN-SAD, the total effect for late-comers is weaker by 0.0338 when compared to the average effect. Thus, the effect of the CEN-SAD on the rule of law for all member states is -0.04 and the additional effect of being a late-joiner is virtually zero. For COMESA member states, joining late is even more detrimental to institutional settings than for its founding members. For countries that have joined after the establishment of the COMESA, the negative effect of spending another year in the COMESA increases by 0.4889. Thus, the effect for all members on the rule of law for an additional year under the agreement is -0.06 and for late-comers -0.09. Similar to the previous results, being a member of the SADC does not have an effect on the rule of law in its member states, neither for founding members nor for late-comers.

Tables 11 and 12 report the effects for late-joiners in the case of East Asian and Latin American RCAs. In all cases, there does not seem to be a different effect depending on whether the country is a founding member nor a if a country has joined at a later stage. All coefficients for the overall effect are insignificant with the exception of the ACD. The effect of an ACD membership is 0.6844 and significant at the 5 %-level. But the joined F-test in Table 12 is insignificant. Thus, the effect on a country's rule of law is 0.04 and there is no additional effect of the ACD for countries that have joined after its establishment.

Table 9
Late-Comers in Middle East and North Africa

Dependent variable: Rule of law 2012			
	(1)	(2)	(3)
Rule of law 1996	0.8060***	0.7944***	0.8134***
	(0.0443)	(0.0564)	(0.0479)
EU MED	0.0626		
	(0.2074)		
EU MED * *late*	-0.7927		
	(1.1757)		
OIC		-0.2818**	
		(0.1226)	
OIC * *late*		0.2361*	
		(0.1279)	
OPEC			0.1238
			(0.3176)
OPEC * *late*			-0.0179
			(0.1436)
Constant	-0.0843**	-0.0326	-0.0913**
	(0.0425)	(0.0526)	(0.0437)
Observations	144	144	144
SY-Test ($\bar{g}$)	38.20	41.30	28.32
SY-Test ($\bar{g} \cdot late$)	335.96	133.79	734.55
F-Test (p-value)	0.758	0.016	0.916

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005). F-test (p-value) tests for joint significance of the RCA coefficient and the interaction term.

5. Conclusion

This paper studies the effect of regional cooperation agreements on the quality of institutions in a cross section of 144 emerging and developing economies. Constructing country/agreement specific instruments for more than 40 agreements. The results show that membership in a regional agreement explains a significant part of the cross-country variation in institutional reforms in Emerging Europe, Central Asia, and Africa.

EU and NATO-related agreements are an important reason why emerging markets in Eastern Europe and Central Asia have been better reformers despite their socialistic heritage and poor initial conditions. In the case of an EU member or an EU potential candidate status, at 2012 levels of institutional quality this is equivalent to, for example, Lativa or Lithuania moving to levels of South Korea or Israel within a year in the case of an EU membership and Morocco improving institutional settings to the levels of Slovakia in the case of an EU potential candidate status.

Although, the negative effects of African agreements are small, regional cooperation agreements are an important factor why African economies are still doing poorly in terms of institutional reforms. In both cases, Europe and Africa, the results suggest that the effect of regional integration agreements are a driver of convergence among countries in those regions towards a certain level of institutional quality.

Despite increased efforts to foster regional integration in Latin America and East Asia since

Table 10
Late-Comers in Sub-Saharan Africa

Dependent variable: Rule of law 2012			
	(1)	(2)	(3)
Rule of law 1996	0.7597***	0.7493***	0.8100***
	(0.0505)	(0.0462)	(0.0463)
CEN-SAD	-0.6135**		
	(0.2893)		
CEN-SAD * *late*	0.0338		
	(0.2012)		
COMESA		-1.0366***	
		(0.2824)	
COMESA * *late*		-0.4889	
		(0.3778)	
SADC			0.1300
			(0.1709)
SADC * *late*			0.0979
			(1.1738)
Constant	-0.0325	0.0328	-0.0994**
	(0.0384)	(0.0510)	(0.0453)
Observations	144	144	144
SY-Test ($\bar{g}$)	44.32	15.19	32.47
SY-Test ($\bar{g} \cdot late$)	313.48	141.22	366.63
F-Test (p-value)	0.043	0.001	0.748

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005). F-test (p-value) tests for joint significance of the RCA coefficient and the interaction term.

the 1990s there is no evidence that regional cooperation agreements have an impact on institutional change in other regions of the world. Only the newly founded Asian Cooperation Dialogue has helped to improve institutional arrangements in East Asia.

The results also show that the effect is stronger for non-founding members. Thus, countries not able to bargain over the rules of the agreement increases the agreement effect.

The major reason for why the effect of regional integration agreements differ is due to the difference in the construction of the agreements. The willingness to delegate sovereignty to a supranational entity is an important mechanism of how regional integration agreements can trigger positive institutional change in small emerging economies through a disciplining effect on the policy agenda and how non-interventionist agreements can worsen institutional settings. EU and NATO-based agreements were built to delegate sovereignty to an intergovernmental authority, such as the EU Commission, regional integration in Latin America, Asia, and Africa is based on the principle to non-interference and keeping neighbouring states and former colonial powers from intervening in domestic policies.

The design of agreements, including the willingness of giving up sovereignty is driven by historical experiences of the members states, in particular the founding members. Thus regional cooperation agreements and are an important transmission channel of how historical experiences are shaping current institutions.

Table 11
Late-Comers in East Asia

Dependent variable: Rule of law 2012			
	(1)	(2)	(3)
Rule of law 1996	0.8161***	0.7988***	0.8161***
	(0.0450)	(0.0470)	(0.0440)
ASEAN	-0.4763		
	(0.3323)		
ASEAN * *late*	0.1314		
	(0.0968)		
ACD		0.6844**	
		(0.3404)	
ACD * *late*		-0.3119	
		(0.2249)	
BIMSTEC			-0.6042
			(0.6571)
BIMSTEC * *late*			-0.2793
			(0.3441)
Constant	-0.0566	-0.1495***	-0.0498
	(0.0409)	(0.0497)	(0.0484)
Observations	144	144	144
SY-Test ($\bar{g}$)	19.35	29.69	16.39
SY-Test ($\bar{g} \cdot late$)	1549.40	319.02	766.88
F-Test (p-value)	0.266	0.130	0.437

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005). F-test (p-value) tests for joint significance of the RCA coefficient and the interaction term.

Table 12
Late-Comers in Latin America and Carribean

Dependent variable: Rule of law 2012		
	(1)	(2)
Rule of law 1996	0.8106***	0.8282***
	(0.0468)	(0.0464)
MERCOSUR7	-0.1980	
	(0.3629)	
MERCOSUR7 * LATE	-0.5486	
	(0.7626)	
CARICOM		-0.3353
		(0.3120)
CARICOM * LATE		0.2536
		(0.2533)
Constant	-0.0670	-0.0597
	(0.0443)	(0.0491)
Observations	144	144
SY-Test ($\bar{g}$)	35.50	22.24
SY-Test ($\bar{g} \cdot late$)	268.51	133.14
F-Test (p-value)	0.498	0.439

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using 2SLS. Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. Membership is measured as *years under the agreement*. SY-test is the weak instrument test suggested by Stock and Yogo (2005). F-test (p-value) tests for joint significance of the RCA coefficient and the interaction term.

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Appendix A. Countries and agreements used for estimation

Table A1
Countries Used for Estimation

Central Asia				
Armenia	Azerbaijan	Belarus	Georgia	Kazakhstan
Kyrgyz Republic	Moldova	Mongolia	Russia	Tajikistan
Turkmenistan	Ukraine	Uzbekistan		
Central and Eastern Europe				
Albania	Bosnia Herzegovina	Bulgaria	Croatia	Cyprus
Czech Republic	Estonia	Hungary	Latvia	Lithuania
Macedonia	Malta	Poland	Romania	Slovakia
Slovenia	Turkey			
Middle East and North Africa				
Afghanistan	Algeria	Bahrain	Egypt	Iran
Iraq	Israel	Jordan	Kuwait	Lebanon
Libya	Mauritania	Morocco	Oman	Pakistan
Qatar	Saudi Arabia	Syria	Tunisia	United Arab Emirates
South East Asia				
Bangladesh	Bhutan	Brunei	Cambodia	China
India	Indonesia	Laos	Malaysia	Myanmar
Nepal	Philippines	South Korea	Sri Lanka	Taiwan
Thailand	Vietnam			
Sub-Saharan Africa				
Angola	Benin	Botswana	Burkina Faso	Burundi
Cameroon	Central African Republic	Chad	Congo (Dem. Rep.)	Congo (Rep.)
Djibouti	Equatorial Guinea	Eritrea	Ethiopia	Gabon
Gambia	Ghana	Guinea-Bissau	Guinea	Ivory Coast
Kenya	Lesotho	Liberia	Madagascar	Malawi
Mali	Mauritius	Mozambique	Namibia	Niger
Nigeria	Seychelles	Senegal	Sierra Leone	South Africa
Swaziland	Tanzania	Togo	Uganda	Zambia
Zimbabwe				
Latin America and Caribbean				
Antigua Barbuda	Argentina	Bahamas	Barbados	Belize
Bolivia	Brazil	Chile	Colombia	Costa Rica
Dominican Republic	Ecuador	Guatemala	Guyana	Honduras
Jamaica	Mexico	Nicaragua	Panama	Paraguay
Peru	St. Lucia	St. Vincent & Grenadines	Suriname	Trinidad Tobago
Uruguay	Venezuela			
Pacific Islands				
Fiji	Kiribati	Micronesia	Palau	Papua New Guinea
Samoa	Solomon Islands	Tonga	Vanuatu	

Table A2

Regional Cooperation Agreements

Agreement	Region
Central and Eastern Europe	
European Monetary Union (EMU)	Exchange Rate Mechanism (ERM) II for 2+ years
EU candidate (CAN)	EU Potential candidate
EU potential candidate (PCC)	Council of Europe
European Union (EU)	EU Candidate
Central European Free Trade Area (CEFTA)	EUCAN or EUPCC before 2007. Any EU partnership agreement after 2007
North Atlantic Treaty Organisation (NATO)	North Atlantic neighbour (before 1999) / NATO Membership Action Plan (MAP) after 1999
NATO Membership Action Plan (MAP)	North Atlantic neighbour
Central Asia	
Collective Security Treaty Organization (CSTO)	Russia and Central Asia
Commonwealth of Independent States (CIS)	Russia and Central Asia
NATO Euro-Atlantic Partnership Council (EAPC)	Europe, Central Asia, and Russia
NATO Individual Partnership Action Plan (IPAP)	NATO Euro-Atlantic Partnership Council (EAPC)
NATO Partnership for Peace (PfP)	Europe, Central Asia, and Russia
Organisation for Security and Co-operation in Europe (OSCE)	Europe, Central Asia, and Russia
Shanghai Cooperation Organisation (SCO)	Asia and Eastern Europe
Technical Aid for the Commonwealth of Independent States (TACIS)	Central Asia and Russia
Sub-Saharan Africa	
Common Market for Eastern and Southern Africa (COMESA)	East and Southern Africa
African Union (AU)	Africa
Community of Sahel-Saharan States (CEN-SAD)	East, West, and North Africa
Economic Community of Central African States (ECCAS)	Central Africa
Economic Community of West African States (ECOWAS)	West Africa
Southern Africa Development Community (SADC)	Southern Africa
West African Economic and Monetary Union (UEMOA)	ECOWAS
Middle East and North Africa	
Arab League (AL)	Share of Muslims
EU Mediterranean Partnership (MED)	Mediterranean Sea neighbour
Greater Arab Free Trade Area (GAFTA)	Arab League
Gulf Cooperation Council (GCC)	Persian Gulf neighbour
NATO Mediterranean Dialogue (MED)	Mediterranean Sea neighbour
Organisation of Islamic Cooperation (OIC)	Share of Muslims
Organisation of the Petroleum Exporting Countries (OPEC)	Petroleum exporting country
(South) East Asia	
Asia Cooperation Dialogue (ACD)	Asia
Association of South East Asian Nations (ASEAN)	South East Asia
ASEAN plus China, Japan, and South Korea (ASEAN+3)	South East Asia
Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)	South Asia
South Asian Association for Regional Cooperation (SAARC)	South Asia
South Asian Free Trade Area (SAFTA)	SAARC
Latin America and Caribbean	
Caribbean Community (CARICOM)	Caribbean
Ibero-American Summit (IAS)	Central and South America and the Caribbean
Latin American Integration Association (ALADI)	South America
Rio Group (RIO)	Central and South America and the Caribbean
Southern Common Market (MERCOSUR)	South America
MERCOSUR plus associated members (MERCOSUR 7)	South America

Note. Region refers to the group of countries used as a dependent variable in Eq. 5 to estimate the instrument.

Table A3
Variable Description

Variable	Description
Rule of law	Index measuring the quality of economic institutions, defined as *"to which extent agents have confidence in and abide by the rules of society, including contract enforcement and property rights, the police, and the courts, as well as the likelihood of crime"* Kaufmann *et al.* (2010). The index ranges from -2.5 (bad) to 2.5 (good) with the world average set to zero in each year. Source: World Bank Worldwide Governance Indicators.
GDP	Gross domestic product based on purchasing-power-parity (PPP) valuation of country GDP measured in current international dollars. Source: IMF World Economic Outlook.
GDP per capita	Gross domestic product based on purchasing-power-parity (PPP). Per capita GDP is measured in current international dollars. Source: IMF World Economic Outlook.
Population	Total population of the country (mid-year estimates). Source: IMF World Economic Outlook.
Inflation	Average annual inflation rate (in percent). Source: IMF World Economic Outlook.
Temperature	Average temperature per year in degree Celsius. Source: World Bank World Development Indicators.
Precipitation	Average precipitation per year in millimetres. Source: World Bank World Development Indicators.
Ethnic fractionalisation	Combination of racial and linguistic characteristics. Probability that two randomly selected people will not belong to the same ethnic group in a country. The higher the probablility, the more fractionalised the country is. Source: Alesina *et al.* (2003).
Religious fractionalisation	Probability that two randomly selected people will not belong to the same religious group in a country. The higher the probablility, the more fractionalised the country is. Source: Alesina *et al.* (2003).
Linguistic fractionalisation	Probability that two randomly selected people from a given country will not belong to the same linguistic group. The higher the probability, the more fractionalised a country is. Source: Alesina *et al.* (2003).
Colonial origin	Index of former Western overseas colonialism since the year 1700. In cases of several colonial powers, the last one is counted. The categories are: (0) Never colonized, (1) Dutch, (2) Spanish, (3) Italian, (4) United States, (5) British, (6) French, (7) Portuguese, (8) Belgian, (9) British-French, and (10) British-French. Source: Hadenius and Teorell (2005).
Legal origin	Identifies the legal origin of a country. The categories are: (1) English Common Law, (2) French Commercial Law, (3) German Commercial Code, (4) Scandinavian Commercial Code, and (5) Socialist/Communist Laws. Source: La Porta *et al.* (2008).
Region	Variable indicating the region in which a country belongs in. The categories are: (1) Emerging Europe, (2) Middle East and North Africa, (3) Latin America and Caribbean, (4) Sub-Saharan Africa, (5) (South) East Asia, (6) Pacific islands, and (7) Central Asia. Source: See Table A1.
Openness	Total imports plus exports of goods and services per year as share of GDP. Source: World Bank World Development Indicators, UN UNCTAD.
Debt	General government debt calculated as gross debt minus financial assets corresponding to debt instruments measured in percentage of GDP. Source: Abbas *et al.* (2010).
Net borrowing	General government net lending (+)/ borrowing (-) calculated as revenue minus total expenditure measured in percent of GDP. Source: IMF World Economic Outlook.

Note. Variables used for the construction of the instrument in Eq. 5 and for the OLS estimations in Online Appendix B.

Table A4
Specifications of Equation 5

RCA	Variables in $\mathbf{X}_j$
Central and Eastern Europe	
EMU	GDP per capita, GDP per capita^2, GDP, GDP^2, Rule of law, Rule of law^2, Population, Population^2, Inflation, Inflation^2, Borrow, Borrow^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2, Religious fractionalisation
EU	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
EU CAN	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
EU PCC	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Population, Population^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2
CEFTA	GDP per capita, GDP per capita^2, GDP, Rule of law, Temperature, Temperature^2, Rainfall, Openness, Openness^2
NATO	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
NATO MAP	GDP per capita, GDP per capita^2, GDP, GDP, Rule of law, Rule of law^2, Population, Population^2, Inflation, Inflation^2, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Openness^2, Ethnic fractionalisation, Ethnic fractionalisation^2, Religious fractionalisation, Religious fractionalisation^2, Borrow, Borrow^2, Legal Origin
Central Asia	
CSTO	GDP, GDP^2, Rule of law, Rule of law^2, Temperature, Temperature^2, Rainfall, Rainfall^2, Population, Inflation, Inflation^2, Openness, Openness^2, Ethnic fractionalisation, Religious fractionalisation, Religious fractionalisation^2, Linguistic fractionalisation, Borrow, Borrow^2
CIS	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
NATO EAPC	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
NATO IPAP	GDP, GDP^2, Rule of law, Temperature, Temperature^2, Rainfall, Inflation, Inflation^2, Population, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2, Religious fractionalisation, Religious fractionalisation^2, Linguistic fractionalisation
NATO PfP	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
OSCE	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
SCO	GDP, Temperature, Temperature^2, Rainfall, Borrow
TACIS	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation

Continued on next page

Table A4 – *Continued from previous page*

RCA	Variables in $\mathbf{X}_j$
Sub-Saharan Africa	
AU	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
COMESA	GDP per capita, GDP, GDP^2, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Inflation, Inflation^2, Borrow, Borrow^2
CEN-SAD	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
ECCAS	GDP per capita, GDP per capita^2, GDP, GDP, Rule of law, Temperature, Rainfall, Rainfall^2, Population, Population^2, Openness, Openness^2, Ethnic fractionalisation, Religious fractionalisation, Linguistic fractionalisation, Borrow, Borrow^2
ECOWAS	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
SADC	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Temperature^2, Rainfall, Rainfall^2, Inflation, Inflation^2, Population, Openness, Ethnic fractionalisation, Religious fractionalisation, Linguistic fractionalisation, Borrow, Borrow^2
UEMOA	GDP per capita, GDP per capita^2, GDP, GDP^2, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Inflation, Inflation^2, Population, Population^2, Openness, Openness^2, Ethnic fractionalisation, Religious fractionalisation, Religious fractionalisation^2, Linguistic fractionalisation, Linguistic fractionalisation^2, Borrow, Borrow^2
Middle East and North Africa	
AL	GDP, Temperature, Rainfall, Rainfall^2, Religious fractionalisation, Religious fractionalisation^2, Inflation
EU MED	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Rainfall^2, Inflation, Inflation^2, Population, Population^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation, Religious fractionalisation, Religious fractionalisation^2, Borrow, Borrow^2
GAFTA	GDP, Rule of law, Temperature, Rainfall, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
GCC	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Population, Population^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2
NATO MED	GDP, Rule of law, Temperature, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation, Religious fractionalisation^2
OIC	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
OPEC	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Population, Population^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2
(South) East Asia	

Continued on next page

Table A4 – *Continued from previous page*

RCA	Variables in $\mathbf{X}_j$
ACD	GDP per capita, GDP, GDP^2, Rule of law, Rule of law^2, Temperature, Temperature^2, Rainfall, Population, Population^2, Openness, Openness^2, Ethnic fractionalisation, Religious fractionalisation, Linguistic fractionalisation, Borrow, Borrow^2
ASEAN	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Population, Population^2, Inflation, Inflation^2, Openness, Openness^2, Ethnic fractionalisation, Religious fractionalisation, Linguistic fractionalisation, Linguistic fractionalisation^2, Borrow, Borrow^2
ASEAN+3	GDP per capita, GDP per capita^2, GDP, Temperature, Rainfall, Inflation, Inflation^2, Openness, Openness^2
BIMSTEC	GDP per capita, GDP, GDP^2, Rule of law, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2, Inflation, Inflation^2, Population
SAARC	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Population, Population^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2
SAFTA	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Rainfall, Population, Population^2, Openness, Ethnic fractionalisation, Ethnic fractionalisation^2
Latin America and Caribbean	
CARICOM	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
IAS	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
ALADI	GDP per capita, GDP per capita^2, GDP, Rule of law, Rule of law^2, Temperature, Temperature^2, Rainfall, Rainfall^2, Population, Population^2, Inflation, Inflation^2, Openness, Openness^2, Ethnic fractionalisation, Ethnic fractionalisation^2, Religious fractionalisation, Religious fractionalisation^2, Linguistic fractionalisation, Borrow, Borrow^2
RIO	GDP, Rule of law, Temperature, Temperature^2, Rainfall, Rainfall^2, Openness, Ethnic fractionalisation, Religious fractionalisation
MERCOSUR	GDP per capita, GDP per capita^2, GDP, GDP, Rule of law, Rule of law^2, Temperature, Temperature^2, Rainfall, Rainfall^2, Inflation, Inflation^2, Population, Population^2, Openness, Openness^2, Ethnic fractionalisation, Ethnic fractionalisation^2, Religious fractionalisation, Religious fractionalisation^2, Linguistic fractionalisation, Linguistic fractionalisation^2, Borrow, Borrow^2
MERCOSUR 7	GDP per capita, GDP per capita^2, GDP, Temperature, Temperature^2, Rainfall, Rainfall^2, Inflation, Openness, Openness^2, Ethnic fractionalisation, Ethnic fractionalisation^2, Religious fractionalisation, Religious fractionalisation^2, Linguistic fractionalisation, Linguistic fractionalisation^2, Borrow, Borrow^2

Online Appendix B. OLS Estimations (not for publication)

This section shows the ordinary least squares (OLS) results between the agreement variables and the rule of law in 2012. The model has the form

$$q_{i2012} = \beta_0 + \beta_1 q_{i1996} + \beta_2 r_{ij} + \mathbf{x_i}'\theta + u_i, \quad \text{for each} \quad j \in J, \tag{B.2}$$

where q_{2012}, q_{1996} are the rule of law in 2012 and 1996 respectively. r_{ij} indicates the time country i has spent under agreement j. $\mathbf{x_i}$ is a $k \times 1$ vector of the k covariates, similar to the variables used to construct the instrument in Section 3. θ is a $k \times 1$ vector of coefficients. u_i are the residuals with a heteroscedastic variance-covariance matrix.

$\mathbf{x}$ consists of the natural log of GDP per capita measured in purchasing power units (PPP) over the course of the sample, log inflation, openness, and the average temperature and rainfall measured in degree Celsius and mm of precipitation respectively. Dummies controlling for the region of country i and the regional and colonial origin are added as additional controls. The data are taken from the same sources as the data used for constructing the country/agreement differences used for the construction of the instrument in Section 3.[14]

Tables B1 - B6 show the OLS results for the various agreements tested in Section 4.1. For the sake of brevity, only the coefficients of interest are reported. The additional covariates are subsumed in the groups *Controls*, *Regional*, *Colonial*, and *Legal* according to their nature.

In all cases, the coefficients for the different RCA variables differ from the IV results in Section 4.1 in terms of size, direction, and significance. On average, OLS results underestimate the effects for the different RCAs.

Table B1 shows the OLS estimates for European RCAs. The first panel of Table B1 shows the estimates for being a member of the euro area. Being a member of the euro zone in the first two specifications is significant at the 1 and 5 %-level of significance. Adding further controls to the equation turns the effect insignificant.

The second panel in Table B1 shows the effect of an EU membership on institutional change. All specifications show that being an EU member is positively associated with a better rule of law. The coefficients are significant at least the 10 %-level. Adding more covariates to the model, however, reduces the effect. The coefficient in the bivariate regression in the first column suggests that the effect is around 1.03. The coefficient drops down to 0.59 when adding additional controls and regional, colonial, and legal origin fixed effects.

Panel three in Table B1 reports the results for being an EU candidate. The coefficients in the first two specifications are significant at the 1 %-level. The remaining coefficients are all insignificant. In all cases, the estimated coefficients are significantly smaller than the ones in Table 1.

The effect of being a potential candidate country of the EU is shown in the fourth panel

[14] For a description of the variables see Table A3.

of Table B1. While the coefficient in the bivariate regression is significant at the 10 %-level, adding more variables yields insignificant or negatively significant coefficients. Adding additional controls to the equation reduces the coefficient down from 1.27 to 0.52. Adding regional, colonial, and legal origin dummies turns the coefficient negative down to -1.23.

Panel 5 and 6 of Table B1 show the OLS results for being a member of the NATO or the NATO MAP. The first two specifications for being a NATO member show a positive effect of a NATO membership on institutional change. Both coefficients are significant at the 1 %-level. Adding regional, colonial, and legal origin dummies reduces the coefficients and the effect becomes insignificant. In the case of the NATO MAP, only the bivariate regression shows a positive effect. All other specifications yield insignificant results.

In the case of the CEFTA in the bottom panel of Table B1, the bivariate regression shows a positive effect of 0.58, significant at the 1 %-level. Adding additional controls makes the effect disappear. Controlling for regional, colonial, and legal fixed effects the coefficient drops down to -0.67 and is significant at the 1 %-level.

Table B1
OLS Results Emerging Europe

	Coefficient	Standard error	Controls	Regional	Colonial	Legal	Obs	Adjusted R^2
EMU member	1.7414***	0.4594	-	-	-	-	144	0.73
	1.2408**	0.4414	Yes	-	-	-	144	0.76
	0.3354	0.4409	Yes	Yes	-	-	144	0.78
	0.4128	0.4659	Yes	Yes	Yes	-	144	0.80
	0.5447	0.6032	Yes	Yes	Yes	Yes	144	0.80
EU member	1.0369***	0.1749	-	-	-	-	144	0.75
	0.8468***	0.1843	Yes	-	-	-	144	0.78
	0.5287**	0.2532	Yes	Yes	-	-	144	0.79
	0.6033**	0.2847	Yes	Yes	Yes	-	144	0.80
	0.5902*	0.3213	Yes	Yes	Yes	Yes	144	0.80
EU candidate	1.0180***	0.2465	-	-	-	-	144	0.75
	0.7789***	0.2147	Yes	-	-	-	144	0.77
	0.3369	0.3059	Yes	Yes	-	-	144	0.79
	0.4048	0.3321	Yes	Yes	Yes	-	144	0.80
	0.5770	0.3551	Yes	Yes	Yes	Yes	144	0.80
EU potential candidate	1.2768**	0.5764	-	-	-	-	144	0.73
	0.5215	0.5094	Yes	-	-	-	144	0.76
	-1.0717***	0.2491	Yes	Yes	-	-	144	0.79
	-1.2031***	0.3003	Yes	Yes	Yes	-	144	0.80
	-1.2343***	0.2966	Yes	Yes	Yes	Yes	144	0.81
NATO member	0.6384***	0.1582	-	-	-	-	144	0.74
	0.5006***	0.1432	Yes	-	-	-	144	0.77
	0.1218	0.1968	Yes	Yes	-	-	144	0.78
	0.1697	0.2178	Yes	Yes	Yes	-	144	0.80
	0.1943	0.2535	Yes	Yes	Yes	Yes	144	0.80
NATO MAP	0.9422***	0.3182	-	-	-	-	144	0.73
	0.4368	0.3035	Yes	-	-	-	144	0.76
	-0.2394	0.2344	Yes	Yes	-	-	144	0.79
	-0.3068	0.2565	Yes	Yes	Yes	-	144	0.80
	-0.4524	0.2774	Yes	Yes	Yes	Yes	144	0.80
CEFTA	0.5858***	0.1574	-	-	-	-	144	0.73
	0.2517	0.1770	Yes	-	-	-	144	0.76
	-0.4469**	0.1726	Yes	Yes	-	-	144	0.79
	-0.4557**	0.1819	Yes	Yes	Yes	-	144	0.80
	-0.6744***	0.2079	Yes	Yes	Yes	Yes	144	0.81

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using OLS with heteroscedasticity-robust standard errors. Only agreement coefficients are reported. Controls are ln(GDP per capita) in PPP, ln(inflation), openness, and average temperature in degree Celsius and rainfall in mm/m^2.

Table B2 reports the OLS results for the RCAs in Central Asia. Overall, the OLS results produce more significant results than the IV results in Table 2. While the effect of the TACIS agreement in the first panel of Table B2 and in Table 2 in Section 4. 1 are both insignificant, the effect of the NATO IPAP is significant in most specifications. The coefficient vary between 0.90 and 0.92 and is significant at the 5 and 10 %-level.

In the case of the NATO PfP, only the coefficient in the bivariate OLS regression is significant at the 10 %-level. In all other specifications, the effect of being a member of the NATO PfP is insignificant. Similarly, in the case of the NATO EAPC, the effect is significant in the first two specifications. Once regional, legal and colonial origin controls are added, the effect becomes insignificant.

Panel 5 in Table B2 shows the effect of being member of the OSCE. In all specifications the effect is significant at the 1 and 5 %-level. The effect varies between 0.26 and 0.32. In all cases, the effects are smaller than the IV result in Table 2.

Panel 6–8 in Table B2 shows the effect of being a member of the SCO, the CSTO, and the CIS. While in most specifications the results are insignificant, the ones using additional controls but without regional, legal, and colonial origin controls are negatively significant at the 5 %-level.

Table B3 shows the OLS results for African RCAs. In the case of the AU, all but the second specification turns out to be significant. The second specification, using additional controls, shows that being a member of the AU has a positive effect on institutional change of 0.33 and is significant at the 5 %-level. This contrasts with the result in Table 3 that being a member of the AU is negatively insignificant.

Most of the results for the ECOWAS in the second panel of Table B3 are in line with the IV estimates. Being a member of the ECOWAS has no effect on institutional change. Only the specification using additional controls shows a positive effect of an ECOWAS membership of 0.26 significant at the 5 %-level, which contradicts the IV result in Table 3.

The results in panel 3 and 4 for the effects of the CEN-SAD and the COMESA do not show any significant effects. In contrast to the results in Table 3 that show a negative effect of being a member of the CEN-SAD or the COMESA.

The results for the SADC, the ECCAS, and the UEMOA in Table 3 show no effect on institutional change, the results in panels 5–7 show by and large the no effect as well. Only the second specification of panel 5 suggests a positive effect of an SADC membership and a negative effect of the ECCAS for the extended specifications. Again, this is at the odds with the IV results in Table 3.

The results in Table B4 show the results for being a member of an RCA in the MENA region. While the coefficients in Table 4 are insignificant, two of the specifications for the GCC in Table B4 show a positive effect 0.30 and 0.35, similar to the additional results in Table 7.

Table B5 shows the OLS results for RCAs in East Asia. The results for the ASEAN and the ASEAN+3 are identical to the results in Table 5. Both RCAs have no effect of on institutional settings in Asian countries. In the case of the ACD, contrary to the effect in Table 4, the

Table B2
OLS Results Central Asia

	Coefficient	Standard error	Controls	Regional	Colonial	Legal	Obs.	Adjusted R^2
EU TACIS	0.1005	0.1912	-	-	-	-	144	0.72
	-0.3426	0.2058	Yes	-	-	-	144	0.76
	1.2646	0.7978	Yes	Yes	-	-	144	0.79
	1.1434	0.8550	Yes	Yes	Yes	-	144	0.80
	1.0970	0.8740	Yes	Yes	Yes	Yes	144	0.80
NATO IPAP	0.9326*	0.4813	-	-	-	-	144	0.72
	0.4593	0.4635	Yes	-	-	-	144	0.76
	0.9836**	0.4724	Yes	Yes	-	-	144	0.79
	0.9202*	0.4997	Yes	Yes	Yes	-	144	0.80
	0.9005*	0.5046	Yes	Yes	Yes	Yes	144	0.81
NATO PfP	0.2800**	0.1219	-	-	-	-	144	0.73
	-0.0165	0.1440	Yes	-	-	-	144	0.76
	-0.0646	0.1838	Yes	Yes	-	-	144	0.78
	-0.1130	0.2076	Yes	Yes	Yes	-	144	0.80
	-0.1658	0.2356	Yes	Yes	Yes	Yes	144	0.80
NATO EAPC	0.3095***	0.0839	-	-	-	-	144	0.74
	0.2345*	0.1349	Yes	-	-	-	144	0.76
	-0.0664	0.1070	Yes	Yes	-	-	144	0.78
	-0.1178	0.1861	Yes	Yes	Yes	-	144	0.80
	-0.0525	0.2086	Yes	Yes	Yes	Yes	144	0.80
OSCE	0.3254***	0.0801	-	-	-	-	144	0.74
	0.2686**	0.1037	Yes	-	-	-	144	0.77
	0.2784***	0.0921	Yes	Yes	-	-	144	0.79
	0.2869**	0.1075	Yes	Yes	Yes	-	144	0.80
	0.2933**	0.1156	Yes	Yes	Yes	Yes	144	0.80
SCO	-0.0174	0.1347	-	-	-	-	144	0.71
	-0.3107**	0.1545	Yes	-	-	-	144	0.76
	-0.1323	0.1849	Yes	Yes	-	-	144	0.79
	-0.1542	0.1934	Yes	Yes	Yes	-	144	0.80
	-0.1097	0.1985	Yes	Yes	Yes	Yes	144	0.80
CSTO	0.0304	0.1263	-	-	-	-	144	0.71
	-0.2981**	0.1421	Yes	-	-	-	144	0.76
	-0.1500	0.1999	Yes	Yes	-	-	144	0.79
	-0.1365	0.2042	Yes	Yes	Yes	-	144	0.80
	-0.1267	0.2053	Yes	Yes	Yes	Yes	144	0.80
CIS	0.0526	0.1123	-	-	-	-	144	0.71
	-0.2398**	0.1177	Yes	-	-	-	144	0.76
	-0.1103	0.3511	Yes	Yes	-	-	144	0.78
	-0.1160	0.3552	Yes	Yes	Yes	-	144	0.80
	-0.1188	0.3555	Yes	Yes	Yes	Yes	144	0.80

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using OLS with heteroscedasticity-robust standard errors. Only agreement coefficients are reported. Controls are ln(GDP per capita) in PPP, ln(inflation), openness, and average temperature in degree Celsius and rainfall in mm/m^2.

results in Table B4 show no significant effect of an ACD membership. Apart from the bivariate specifications, which show a negative significant effect, all results for the SAARC, SAFTA, and the BIMSTEC do not show a significant effect of being a member in any of those agreements on institutional change in East Asia.

Table B6 shows the results for RCAs in Latin America. The results in Table B6 are in line with the results in Table 6 and show no significant effect of an RCA-membership on institutional change. The results for the MERCOSUR, MERCOSUR+7, ALADI, and the CARICOM are all insignificant. In contrast to this, the coefficient of being in the IAS is significant in several specifications. However, the coefficients vary in sign and magnitude. While the second specification suggests that there is a negative effect of being a member of the IAS, the last two specifications in panel 3 suggest a positive effect of 0.55 and 0.60 respectively. As regards the membership in

Table B3
OLS Results Sub-Saharan Africa

	Coefficient	Standard error	Controls	Regional	Colonial	Legal	Obs.	Adjusted R^2
AU	-0.0387	0.1140	-	-	-	-	144	0.71
	0.3318**	0.1309	Yes	-	-	-	144	0.77
	0.0145	0.2169	Yes	Yes	-	-	144	0.78
	0.2448	0.2312	Yes	Yes	Yes	-	144	0.80
	0.2330	0.2201	Yes	Yes	Yes	Yes	144	0.80
ECOWAS	0.0390	0.1121	-	-	-	-	144	0.71
	0.2644**	0.1258	Yes	-	-	-	144	0.77
	0.1295	0.1377	Yes	Yes	-	-	144	0.79
	0.1827	0.1373	Yes	Yes	Yes	-	144	0.80
	0.1554	0.1361	Yes	Yes	Yes	Yes	144	0.80
CEN-SAD	-0.1957	0.1213	-	-	-	-	144	0.72
	-0.0261	0.1574	Yes	-	-	-	144	0.76
	-0.1840	0.1452	Yes	Yes	-	-	144	0.79
	-0.0153	0.1783	Yes	Yes	Yes	-	144	0.80
	-0.0060	0.1783	Yes	Yes	Yes	Yes	144	0.80
COMESA	-0.1083	0.1092	-	-	-	-	144	0.72
	0.1235	0.1157	Yes	-	-	-	144	0.76
	-0.0176	0.1284	Yes	Yes	-	-	144	0.78
	-0.0920	0.1327	Yes	Yes	Yes	-	144	0.80
	-0.0652	0.1250	Yes	Yes	Yes	Yes	144	0.80
SADC	-0.0270	0.0964	-	-	-	-	144	0.71
	0.2241**	0.1085	Yes	-	-	-	144	0.76
	0.1375	0.1599	Yes	Yes	-	-	144	0.79
	0.0479	0.1733	Yes	Yes	Yes	-	144	0.80
	0.0195	0.1729	Yes	Yes	Yes	Yes	144	0.80
ECCAS	0.0183	0.1046	-	-	-	-	144	0.71
	-0.0236	0.1301	Yes	-	-	-	144	0.76
	-0.1885	0.1520	Yes	Yes	-	-	144	0.79
	-0.3058*	0.1320	Yes	Yes	Yes	-	144	0.80
	-0.2720*	0.1342	Yes	Yes	Yes	Yes	144	0.80
UEMOA	-0.0545	0.1103	-	-	-	-	144	0.71
	0.0962	0.1310	Yes	-	-	-	144	0.76
	-0.0258	0.1378	Yes	Yes	-	-	144	0.78
	0.0536	0.1412	Yes	Yes	Yes	-	144	0.80
	0.0807	0.1466	Yes	Yes	Yes	Yes	144	0.80

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using OLS with heteroscedasticity-robust standard errors. Only agreement coefficients are reported. Controls are ln(GDP per capita) in PPP, ln(inflation), openness, and average temperature in degree Celsius and rainfall in mm/m^2.

the Rio Group, all specifications, apart from the second one in panel 2 are insignificant. The second specification in Table B6 shows a significant result of -0.22.

Table B4
OLS Results Middle East and North Africa

	Coefficient	Standard error	Controls	Regional	Colonial	Legal	Obs.	Adjusted R^2
AL	-0.0179	0.1023	-	-	-	-	144	0.71
	-0.1196	0.1096	Yes	-	-	-	144	0.76
	0.0328	0.1089	Yes	Yes	-	-	144	0.78
	0.0827	0.1099	Yes	Yes	Yes	-	144	0.80
	0.0981	0.1191	Yes	Yes	Yes	Yes	144	0.80
GAFTA	-0.0181	0.1244	-	-	-	-	144	0.71
	-0.1886	0.1370	Yes	-	-	-	144	0.76
	0.0059	0.1334	Yes	Yes	-	-	144	0.78
	0.0707	0.1602	Yes	Yes	Yes	-	144	0.80
	0.0954	0.1794	Yes	Yes	Yes	Yes	144	0.80
GCC	0.3002*	0.1557	-	-	-	-	144	0.72
	0.2244	0.1703	Yes	-	-	-	144	0.76
	0.3558**	0.1661	Yes	Yes	-	-	144	0.79
	0.2421	0.1811	Yes	Yes	Yes	-	144	0.80
	0.2563	0.1918	Yes	Yes	Yes	Yes	144	0.80
EU MED	-0.0254	0.1197	-	-	-	-	144	0.71
	-0.0875	0.1314	Yes	-	-	-	144	0.76
	0.0158	0.1485	Yes	Yes	-	-	144	0.78
	0.0692	0.1560	Yes	Yes	Yes	-	144	0.80
	0.0745	0.1721	Yes	Yes	Yes	Yes	144	0.80
NATO MED	-0.1064	0.1175	-	-	-	-	144	0.72
	-0.0816	0.1041	Yes	-	-	-	144	0.76
	0.1315	0.1380	Yes	Yes	-	-	144	0.79
	0.1826	0.1485	Yes	Yes	Yes	-	144	0.80
OIC	-0.0204	0.0697	-	-	-	-	144	0.71
	-0.0540	0.0742	Yes	-	-	-	144	0.76
	-0.0634	0.0922	Yes	Yes	-	-	144	0.79
	-0.0452	0.0952	Yes	Yes	Yes	-	144	0.80
	-0.0278	0.1028	Yes	Yes	Yes	Yes	144	0.80
OPEC	-0.0369	0.1428	-	-	-	-	144	0.71
	-0.1716	0.1349	Yes	-	-	-	144	0.76
	-0.1107	0.1468	Yes	Yes	-	-	144	0.79
	-0.1193	0.1506	Yes	Yes	Yes	-	144	0.80
	-0.0971	0.1547	Yes	Yes	Yes	Yes	144	0.80

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using OLS with heteroscedasticity-robust standard errors. Only agreement coefficients are reported. Controls are ln(GDP per capita) in PPP, ln(inflation), openness, and average temperature in degree Celsius and rainfall in mm/m^2.

Table B5
OLS Results (South) East Asia

	Coefficient	Standard error	Controls	Regional	Colonial	Legal	Obs.	Adjusted R^2
ASEAN	-0.1139	0.0950	-	-	-	-	144	0.72
	-0.0164	0.1030	Yes	-	-	-	144	0.76
	-0.1848	0.1430	Yes	Yes	-	-	144	0.79
	-0.1237	0.1649	Yes	Yes	Yes	-	144	0.80
	-0.0827	0.1673	Yes	Yes	Yes	Yes	144	0.80
ASEAN+3	-0.0573	0.0946	-	-	-	-	144	0.71
	-0.0033	0.0997	Yes	-	-	-	144	0.76
	-0.1237	0.1348	Yes	Yes	-	-	144	0.79
	-0.0998	0.1549	Yes	Yes	Yes	-	144	0.80
	-0.1102	0.1433	Yes	Yes	Yes	Yes	144	0.80
ACD	0.0388	0.1270	-	-	-	-	144	0.71
	0.0060	0.1168	Yes	-	-	-	144	0.76
	0.1108	0.1919	Yes	Yes	-	-	144	0.79
	0.0051	0.2027	Yes	Yes	Yes	-	144	0.80
	0.0550	0.1935	Yes	Yes	Yes	Yes	144	0.80
SAARC	-0.1908**	0.0918	-	-	-	-	144	0.72
	-0.0518	0.0999	Yes	-	-	-	144	0.76
	-0.0155	0.0956	Yes	Yes	-	-	144	0.78
	-0.0516	0.1186	Yes	Yes	Yes	-	144	0.80
	0.0001	0.1493	Yes	Yes	Yes	Yes	144	0.80
SAFTA	-0.4634**	0.2228	-	-	-	-	144	0.72
	-0.1257	0.2427	Yes	-	-	-	144	0.76
	-0.0376	0.2321	Yes	Yes	-	-	144	0.78
	-0.1252	0.2881	Yes	Yes	Yes	-	144	0.80
	0.0002	0.3625	Yes	Yes	Yes	Yes	144	0.80
BIMSTEC	-0.2173*	0.1108	-	-	-	-	144	0.72
	-0.0394	0.1177	Yes	-	-	-	144	0.76
	-0.1298	0.1305	Yes	Yes	-	-	144	0.79
	-0.1697	0.1704	Yes	Yes	Yes	-	144	0.80
	-0.0702	0.1647	Yes	Yes	Yes	Yes	144	0.80

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using OLS with heteroscedasticity-robust standard errors. Only agreement coefficients are reported. Controls are ln(GDP per capita) in PPP, ln(inflation), openness, and average temperature in degree Celsius and rainfall in mm/m^2.

Table B6
OLS Results Latin America and Caribbean

	Coefficient	Standard error	Controls	Regional	Colonial	Legal	Obs.	Adjusted R^2
MERCOSUR	-0.0847	0.1992	-	-	-	-	144	0.71
	-0.1002	0.2360	Yes	-	-	-	144	0.76
	0.0360	0.2394	Yes	Yes	-	-	144	0.78
	0.0308	0.2564	Yes	Yes	Yes	-	144	0.80
	0.0611	0.2577	Yes	Yes	Yes	Yes	144	0.80
MERCOSUR 7	-0.0861	0.2221	-	-	-	-	144	0.71
	-0.1401	0.2437	Yes	-	-	-	144	0.76
	0.0551	0.2525	Yes	Yes	-	-	144	0.78
	0.1343	0.2724	Yes	Yes	Yes	-	144	0.80
	0.1728	0.2750	Yes	Yes	Yes	Yes	144	0.80
IAS	-0.1330	0.1074	-	-	-	-	144	0.72
	-0.2089*	0.1134	Yes	-	-	-	144	0.76
	-0.1139	0.1502	Yes	Yes	-	-	144	0.79
	0.5535**	0.2698	Yes	Yes	Yes	-	144	0.80
	0.6047**	0.2578	Yes	Yes	Yes	Yes	144	0.80
ALADI	-0.1382	0.1554	-	-	-	-	144	0.72
	-0.2257	0.1599	Yes	-	-	-	144	0.76
	-0.1123	0.1856	Yes	Yes	-	-	144	0.79
	0.0084	0.1936	Yes	Yes	Yes	-	144	0.80
	0.0455	0.1938	Yes	Yes	Yes	Yes	144	0.80
Rio Group	-0.1513	0.0994	-	-	-	-	144	0.72
	-0.2271**	0.1055	Yes	-	-	-	144	0.77
	-0.1951	0.1556	Yes	Yes	-	-	144	0.79
	0.0166	0.2507	Yes	Yes	Yes	-	144	0.80
	0.0357	0.2562	Yes	Yes	Yes	Yes	144	0.80
CARICOM	0.0326	0.1069	-	-	-	-	144	0.71
	0.0472	0.1333	Yes	-	-	-	144	0.76
	0.1653	0.1454	Yes	Yes	-	-	144	0.79
	-0.1327	0.3168	Yes	Yes	Yes	-	144	0.80
	-0.1736	0.3230	Yes	Yes	Yes	Yes	144	0.80

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using OLS with heteroscedasticity-robust standard errors. Only agreement coefficients are reported. Controls are ln(GDP per capita) in PPP, ln(inflation), openness, and average temperature in degree Celsius and rainfall in mm/m^2.

Online Appendix C. Local-to-Zero Approximations (not for publication)

An alternative way of evaluating the validity of the exclusion restriction is using the approach suggested by Conley *et al.* (2012). The test is based on the idea that the data in the sample is generated conditional on the instrument and that, in case the exclusion restriction is violated, that the estimation bias in β_2 is of the same magnitude as the sampling error. Suppose the model in Eqs. 1 and 2 rewritten in matrix form such that

$$\mathbf{q}_{2012} = \mathbf{y}\beta + \bar{\mathbf{g}}\gamma + \varepsilon, \quad \text{for each} \quad j \in J, \tag{C.2}$$

$$\mathbf{y} = \bar{\mathbf{g}}\alpha + \upsilon, \tag{C.3}$$

where $\mathbf{y} = (1 \ r_{i1996} \ r_{ij})$, $\beta = (\beta_0 \ \beta_1 \ \beta_2)'$, $\bar{\mathbf{g}} = (1 \ q_{i1996} \ \bar{g}_{ij})$, and $\alpha = (\alpha_0 \ \alpha_1 \ \alpha_2)'$. The difference between the model in Eqs. C.2 and C.3 and the standard 2SLS model in Eqs. 1 and 2 is the $\bar{\mathbf{g}}\gamma$ term that enters the second stage equation with $\gamma = [0 \ 0 \ \gamma_3]'$. γ_3 reflects the exogeneity error of the instrument. If $\gamma_3 \neq 0$ the exclusion restriction in Eq. 4 is does not hold and γ and β are jointly not identified.

Suppose that the data is generated by a two-step process in which realisations from the distribution for γ_3 are drawn first and the data of the model is generated conditional on the value of γ_3. Assuming that the exogeneity error and the sampling error of β_2 are of the same order of magnitude such that $\gamma_3 = (\beta_2 - \hat{\beta}_2)/\sqrt{N}$, one can use approximations for β_2 conditional on the distribution of γ_3 in order to conduct inference on the parameters of the endogenous variable in the model, if the error is close to zero. Assuming $\gamma \sim N(\mu_\gamma, \mathbf{\Omega}_\gamma)$ with mean μ_γ and variance-covariance matrix $\mathbf{\Omega}_\gamma$, β follows a normal distribution of the form

$$\widehat{\beta}^{\mathbf{approx}} \sim N(\beta + \mathbf{A}\mu_\gamma, \mathbf{V} + \mathbf{A}\mathbf{\Omega}_\gamma\mathbf{A}'), \tag{C.4}$$

where $\mathbf{A} = (\mathbf{y}'\bar{\mathbf{g}}(\bar{\mathbf{g}}'\bar{\mathbf{g}}))^{-1}\bar{\mathbf{g}}'\mathbf{y})^{-1}(\mathbf{y}'\bar{\mathbf{g}})$ and $\mathbf{V}$ is the asymptotic variance-covariance matrix of the 2SLS estimate of β.[15]

While in some cases the choice of a prior for γ is straightforward, in the present case this is rather illusive. A starting point is to assume that γ_3 is a fraction of the estimated coefficients for the various RCAs in Section 4. In the following, a weakly informative prior is chosen for γ such that γ_1 and γ_2 have a zero mean and the variances and covariances in $\mathbf{\Omega}$ are set to zero. γ_3 is assumed to have a zero mean, but the variance is conditional on the baseline 2SLS estimate of β_2 such that $\Omega_{\gamma_3} = [\delta\hat{\beta}_{2,2SLS}]^2$ where $\hat{\beta}_{2,2SLS}$ is the 2SLS estimate of the effect of the RCA from Section 4.1 and $\delta \in [0, 1]$.

Table C1 reports the results of the estimates for β conditional on γ_3 assuming that $\delta = 0.1$.

[15] For a more detailed description of the estimator see Conley *et al.* (2012).

For convenience, only the coefficient estimates and standard errors of the variables of interest are reported. Since $\mu_\gamma = (0\ \ 0\ \ 0)'$, the coefficient estimates in Table C1 do not differ from the estimates in Section 4.1. The standard error estimates, however, depend on the distribution of γ.

The top panel in Table C1 shows the results of the re-estimated models for European RCAs. The results in Table C1 are qualitatively similar to the ones in Table 1 with the exception of EU potential candidate variable. The coefficients in the remaining specifications for European RCAs still show a significant and positive effect on the rule of law in membership.

The second panel reports the modified 2SLS estimates for Central Asian RCAs showing similar effects to the estimates in Section 4.1. Being a member of the NATO PfP, the NATO EAPC, or the OSCE exerts a positive influence on institutional change in Central Asia. All three coefficients are positive and significant at the 1 % and the 10 %-level respectively. In line with the results in the previous section, Table C1 shows no significant effects of being a member of the EU TACIS, the NATO IPAP, the SCO, CSTO, and the CIS.

Panel 3 in Table C1 reports the results for African RCAs. Similar to above, the results do not show any difference in terms of the size and significance of the coefficients when compared to the results of Table 3. The AU as well as the CEN-SAD, and the COMESA are significant at the 5 %-level. All other RCAs appear to be insignificant.

The same applies to the remaining results in Table C1. Similar to the results in Tables 5 and 6, the agreements in Latin America and East Asia, with the exception of the ACD appear to have no effect on the rule of law. In the case of the ACD, the results in the bottom panel of Table C1 show a positive effect at the 10 %-level.

Since the prior choices for γ_3 are hard to justify, Figure C.1 shows the sensitivity of the results for different prior choices for RCAs that appear to have a significant effect on institutional change in the previous estimations. μ_γ is still assumed to be zero, but the variance $[\delta\hat{\beta}_{2SLS}]^2$ is allowed to vary on the interval $\delta \in [0, 1]$.

As shown by Figure C.1, the results for European RCAs are robust to alternative prior choices. In particular, the results for an EU candidate status (top row, second panel) and being a member of the NATO (second row, first panel) appear to be insensitive to alternative priors. Even for $\delta = 1$, the β_2 is still significant at the 10 %-level. Similarly, the coefficient for the NATO membership does not change up to a level of $[0.85\hat{\beta}_{2,2SLS}]^2$. While results the remaining RCAs in Figure C.1 are weaker, all coefficients found to be significant in Table C1, are still significant for a variance between $[0.2\hat{\beta}_{2,2SLS}]^2$ and $[0.4\hat{\beta}_{2,2SLS}]^2$. Thus, as long as the correlation between the instrument and the error term is within those boundaries, the results in Section 4.1 are valid.

Table C1

Local-to-Zero Approximations for $\beta_2|\gamma$

	Coefficient	Standard error	95% confidence interval	
Europe				
EMU member	8.2077	10.3276	-12.0339	28.4494
EU member	1.7761***	0.6029	0.5944	2.9578
EU candidate	1.9803**	0.8271	0.3592	3.6013
EU potential candidate	5.0849	3.3328	-1.4473	11.6171
NATO member	1.1272**	0.4381	0.2686	1.9858
NATO MAP	2.6622**	1.3171	0.0808	5.2437
CEFTA	1.8244**	0.8047	0.2472	3.4016
Central Asia				
EU TACIS	0.4076	0.3401	-0.2590	1.0741
NATO IPAP	3.6729	4.3866	-4.9247	12.2705
NATO PfP	0.3135*	0.1670	-0.0137	0.6408
NATO EAPC	0.3184***	0.1157	0.0916	0.5451
OSCE	0.3316***	0.1226	0.0912	0.5720
SCO	0.4893	1.6952	-2.8332	3.8118
CSTO	0.1104	0.3119	-0.5010	0.7217
CIS	0.2239	0.2513	-0.2686	0.7163
Sub-Saharan Africa				
AU	-0.5187**	0.2138	-0.9377	-0.0998
ECOWAS	-0.3757	0.2336	-0.8336	0.0822
CEN-SAD	-0.5922**	0.2676	-1.1167	-0.0678
COMESA	-1.0450**	0.4532	-1.9332	-0.1567
SADC	0.1626	0.1830	-0.1961	0.5214
ECCAS	-0.3072	0.2740	-0.8443	0.2299
UEMOA	-0.4187	0.4417	-1.2844	0.4469
Middle East and North Africa				
AL	-0.1770	3.3927	-6.8266	6.4726
GAFTA	-0.1127	0.2345	-0.5723	0.3469
GCC	0.4769	0.3013	-0.1137	1.0675
EU MED	0.0566	0.2789	-0.4899	0.6032
NATO MED	-0.1366	0.6266	-1.3647	1.0915
OIC	-0.1875	2.6650	-5.4109	5.0358
OPEC	0.1171	0.3205	-0.5111	0.7452
(South) East Asia				
ASEAN	-0.4267	0.4276	-1.2648	0.4114
ASEAN+3	-0.2888	0.3541	-0.9829	0.4052
ACD	0.5502*	0.3307	-0.0981	1.1984
SAARC	-0.2607	0.2934	-0.8357	0.3143
SAFTA	-0.2719	0.6962	-1.6364	1.0926
BIMSTEC	-0.6186	1.6845	-3.9201	2.6829
Latin American and Caribbean				
MERCOSUR	-0.2890	4.6868	-9.4750	8.8969
MERCOSUR 7	-0.3760	0.4348	-1.2281	0.4761
IAS	-0.4231	0.3058	-1.0224	0.1761
ALADI	-0.2870	0.2109	-0.7004	0.1264
Rio Group	-0.3967	0.2708	-0.9275	0.1340
CARICOM	-0.2793	0.3810	-1.0261	0.4674

Notes. ***, **, * denotes significance at the 1%, 5%, and 10%-level of significance respectively. Equations are estimated using the modified 2SLS estimator by Conley *et al.* (2012). Bootstrapped standard errors clustered at the country-level using 500 replications in parentheses. The models are identical to the models estimated in Section 4.1. Only agreement coefficients are reported. Imposed prior is $\gamma_3 \sim N\left(0, [0.1\hat{\beta}_{2SLS}]^2\right)$.

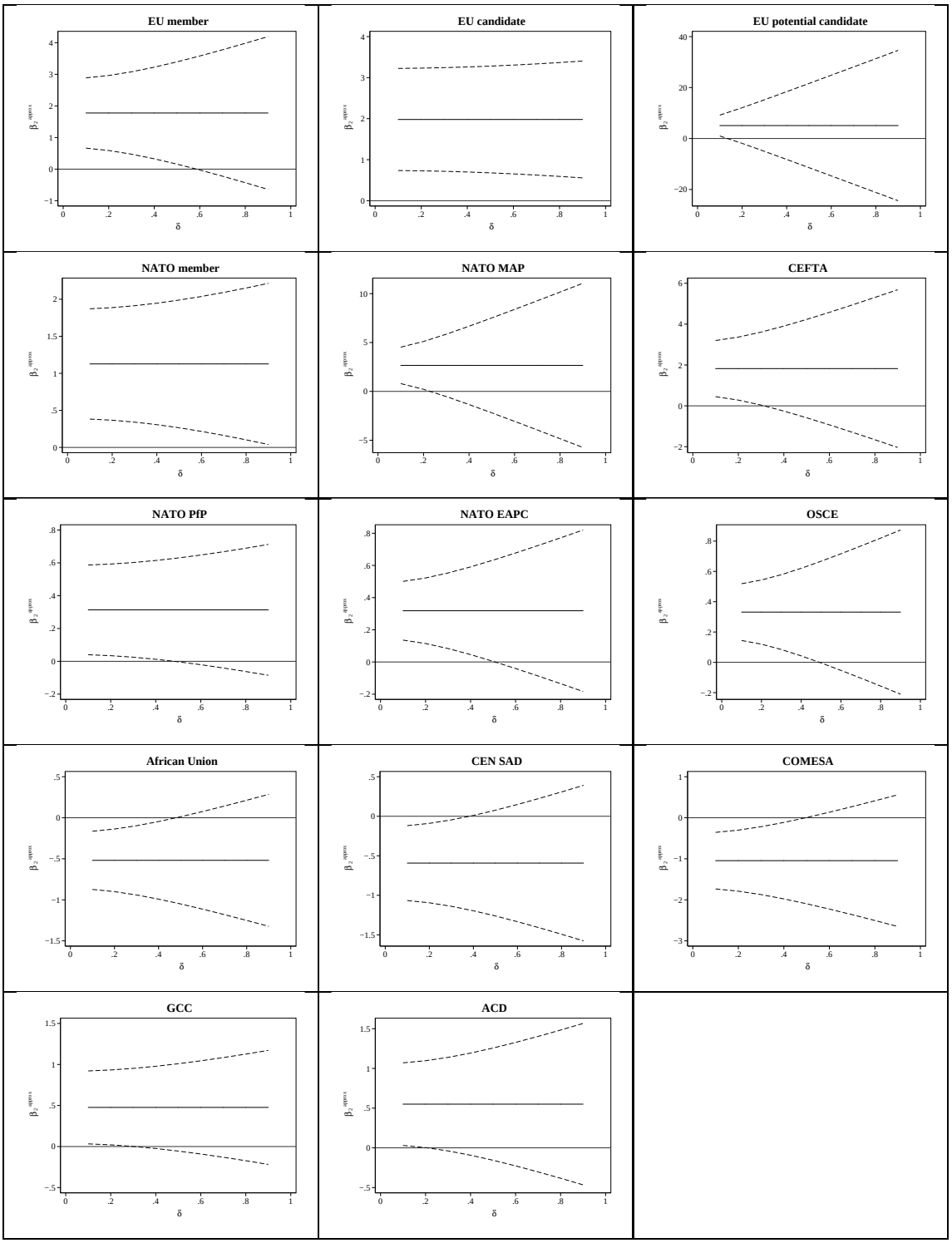

Fig. C.1. *Alternative Priors for* γ

Notes. Solid lines represent the coefficient estimates for β_2. Dashed lines represent 95 % confidence intervals. Equations are estimated using the modified 2SLS estimator by Conley *et al.* (2012) for different choices of γ_3. The imposed prior takes the form $\gamma_3 \sim N\left(0, [\delta\hat{\beta}_{2SLS}]^2\right)$ with $\delta \in [0, 1]$.