2 The Sustainability of Regional Integration Projects in the Post-Soviet Space

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The sustainability of integration groupings is extremely important in the selection of the most workable regional integration schemes. Quantitative analysis shows that of all integration projects in the former Soviet Union the EurAsEC-6 is closest to being what is considered a "sustainable size". This stable integration structure is based on close cooperation between Russia and Kazakhstan.

Integration projects, which are being pursued in many parts of the world, emerge as the result of negotiations and coordination between various actors – both state (members and non-members of an integration group) and nongovernmental. This raises the question of when an emerging structure becomes relatively more sustainable, i.e. less susceptible to disintegration. Of all the factors influencing the sustainability of an integration project, its size must play an important role. It appears that, in terms of size, sustainability has both upper and lower limits (i.e., groupings are unsustainable if they become too large, but they can also be too small to survive). Small groupings are thus susceptible to practically unopposed "takeover" by their larger neighbours. Extremely large groupings face the constant threat of losing member countries.

Analysis of what constitutes a sustainable size for an integration grouping may be carried out from two angles. We may choose as our starting point the traditional understanding of regional economic integration, i.e., the creation of *an international union* between several countries. In this case its sustainable size may correlate to *the number of countries* of an integration grouping or to *the size of its population*. The latter approach may be the more useful, bearing in mind that the diversity within member countries may mean that their internal stability cannot be assumed. The second approach views an integration project as a network of agreements and accords reached by several regional countries. This approach is more flexible and to a greater extent reflects the reality of open regionalism models and tiered integration. In this case, when referring to *the sustainable structure* of an integration project, we define precisely which configuration of the framework of agreements is the most viable.

This article analyses the factors which influence the optimal size of an integration project and attempts to apply its conclusions to the former Soviet Union, in particular, the EurAsEC. We employ quantitative analysis techniques which generate unambiguous and non-contradictory results with regard to the sustainable size and structure of integration associations.

Factors Influencing the Sustainable Size and Structure of an Integration Association

When considering **integration as an international union**, the sustainable size of an integration grouping is defined by the outcome of interaction between two "markets" operating in the region's political and economic system. The first market is the "interstate political market" which involves transaction between countries. The second market is the "market of institutions and economic policies", in which private structures (corporations and citizens) operate, creating demand for certain institutional schemes which states offer. Specific mechanisms include participation in political life, lobbying or "voting with feet" facilitated by, among other factors, the mobility of the means of productions. Under this scheme, a sustainable integration grouping should meet two requirements: it must be attractive to the states involved in it and generate positive economic benefits to private structures.

The stability of an integration grouping is influenced most of all by *the diversity of its members*. If members of an integration group are alike and their populations and elite groups display a certain homogeneity, these structures seem to be less susceptible to disintegration. Excessive diversity threatens consensus among members of a grouping on the common integration conditions and increases the time spent in negotiation and coordination[1]. In other words, diversity increases the "cost" of deals on the "interstate political market", thereby reducing the attractiveness of integration. Diversity is defined by several component factors, for example, ethno-linguistic fractionalism; the circumstances of historical development and peculiarities of institutional systems; differences in living standards and the educational attainment of the population; and urbanisation. Where there is extreme diversity of preference, even efficient integration groupings (i. e., structures where the prosperity of all member countries is generally improved through integration) may become unsustainable[2].

Another parameter defining the sustainability of an integration association is the *efficiency of its institutional environment and management* of the public benefits it makes available to all countries, such as reciprocal trade, security or a shared infrastructure. In other words, *improving the efficiency of an integration grouping increases its sustainable size*. This is especially related to the common benefits produced by integration groups. These influence the "market of institutions and economic policies", improving the quality of the benefits states offer to private structures, thereby increasing their willingness to "pay" for these benefits. All other conditions being equal, the *effective management of an integration grouping* is directly related to the *efficacy of governance* within member countries. High quality governance in all

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[1] *Ruta M. (2005) Economic Theories of Political (Dis)Integration. Journal of Economic Surveys, Vol. 19.*

[2] *Haimanko O., Le Breton M., Weber S. (2005) Transfers in a Polarized Country: Bridging the Gap between Efficiency and Stability. European Economic Review, Vol. 89.*

states involved in an integration union does not guarantee the efficiency of its supranational bodies or of the negotiations which establish the basis of the integration grouping. However, in the absence of efficient interstate institutions, it is unrealistic to expect partners to formulate efficient interstate regulation. Indeed, efficiency of government reduces the "technical" costs of holding international negotiations, the importance of which should not be underestimated.

A problem arises because of the *contradictory influences of diversity and efficiency*. A grouping of highly diverse member states will, as stated above, have a smaller optimal size. Its very diversity, however, may ultimately boost the efficiency of its operation. Thus an increase in the cost of transactions on the "interstate political market" increases the benefits available on the "market of institutions and economic policies". Indeed, an evolutionary approach to economic policy supposes that diversity in integration is a form of "capital" and establishes the conditions for the evolutionary, competitive processes of knowledge generation, innovation and dynamic development. Furthermore, this diversity of preferences is not a static phenomenon but is generated by a dynamic development process in which transactions on the "interstate political market" play an important role[3].

It is apparent that an evaluation of the situation will depend on *the general level of governance within the group*. Relatively more advanced institutions, which incorporate the preferences and reciprocity of different groups, cope better with *diversity issues* and exploit their creative energy (in the terminology of a new, comparative economic theory, they are located on a higher "curve of institutional possibilities"). Less developed institutional systems are more susceptible to this problem and are obliged to find a compromise between diversity and the advantages of integration. This conclusion reinforces the importance of efficient decision-making to the sustainability of a regional structure. For example, in the case of EU expansion, the diversity of preference, though important, plays much less of a role than the ability of EU bodies to adopt decisions at minimum cost[4]. If we consider time spent on decision-making, the potential for unilateral obstacles to be placed before an integration group's member countries and non-egalitarian access to information supplied by various regions become much more significant. In the situation of non-egalitarian access to information, the method of its collection is also fundamentally important[5].

The "sustainable size" of the integration group also depends on its member countries' *level of economic developmen*t. Economic development

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[3] *Herrmann-Pillath C. 2006 Heterogenität, Wachstum von Staaten und wissensschaffender politischer Wettbewerb. In: Vollmer U. (Hrsg.) Oekonomische und politische Grenzen von Wirtschaftsräumen. Berlin: Duncker & Humblot.*

[4] *Apolte Th. (2006) Gibt es eine optimale Grösse der Europäischen Union? In: Vollmer U. (Hrsg.). Oekonomische und politische Grenzen von Wirtschaftsräumen. Berlin: Duncker & Humblot.*

[5] *Behm M., Grüner H.P. (2002) Electoral College, Popular Vote and Regional Information. Mimeo.*

directly influences the development of "markets of institutions and economic policies", determining the behaviour of participants. In economic theory there is no generally accepted explanation of the link between economic development and the optimal size of an integration group. According to some estimates, the link between economic development and integration follows a U-shaped curve: early on, integration formations encourage efficient economic growth, but once a certain level of development is reached, countries are capable of generating similar advantages without the need for formal integration structures created at the expense of their own "coping strategy"[6]. Other experts proceed from the existing linear link between economic development and inclination to integration[7]. However, the results of negotiation between states (on the "interstate political market") may significantly alter results.

Naturally, this is not an exhaustive list of the factors which influence the sustainability of an integration project. For example, the *scale of economic liberalisation in the global economy as a whole* plays a significant role. Obviously, in order to be sustainable, an integration grouping should maintain the optimal size of its internal market, and take advantage of *economies of scale*. However, given that the regulation of global trade is relatively liberal (thanks to the WTO and other world organisations) the *sustainable size of integration groups is getting smaller*[8]. Indeed, domestic economic entities can benefit from access to each other's markets without the need for complex inter-governmental negotiations. A reduction in the sustainable size of an integration group is thus brought about by changes in the "market of institutions and economic policies", whose participants refuse to pay the costs exacted by the "interstate political market".

There are more complex factors at work here, however. In particular, the global trade environment and the structure adopted by regional integration groups are defined by the same processes[9]; it is extremely difficult, therefore, to establish cause and effect between them. Former Soviet countries, for example, pursued regional integration and integration into the global economy in parallel. In addition, the global trade regime is itself created not only by the efforts of global organisations but also by numerous overlapping regional agreements which are increasingly based on the principle of "open regionalism" (and which have given rise to the concept of "integration by network" which is discussed below)[10].

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[6] Casella A., Feinstein J.S. (2002) *Public Goods in Trade: On the Formation of Markets and Jurisdictions. International Economic Review, Vol. 43.*

[7] Bolton P., Roland G., Spolaore E. (1996) *Economic Theories of the Break-Up and Integration of Nations. European Economic Review, Vol. 40.*

[8] Alesina A., Wacziarg R. (1999) *Is Europe Going too Far? Carnegie-Rochester Conference Series on Public Policy, Vol. 51.*

[9] Etro F. (2006) *Political Geography. Public Choice, Vol. 127; Blankart C.B., Koester G. (2006) Political Economics versus Public Choice: Two Views of Political Economy in Competition. Kyklos, Vol. 59.*

[10] Baldwin R. (2006) *Multilaterising Regionalism: Spaghetti Bowls as Building Blocks on the Path to Global Free Trade. NBER Working Paper 12545, September.*

One important factor which influences "sustainable size" is *the conflict of laws*, i.e., the competition between states for mobile means of production. The conflict of laws affects the structure of regional integration in three ways. Firstly, it stimulates the desire for harmonised economic policy as a means of alleviating competitive pressures within the tax and legal regimes[11]. It also encourages the "joy-rider" phenomenon, whereby the violation of established harmonisation agreements has a disproportionate effect on the competition of jurisdictions. In addition, conflict of laws at the expense of ex post harmonisation reduces transaction costs on the "interstate political market", creating the optimum conditions for negotiation. Finally, from the point of view of demand for integration projects in the "market of institutions and economic policies", the conflict of laws makes "voting with the feet" relatively more attractive and reduces active opposition to the creation of an integration group, thus limiting the impact of the diversity of preferences[12].

Finally, it is important in this analysis to discuss *corporate integration (regionalisation)*, i.e., cooperation between states without the creation of formal international unions. There are numerous examples regional cooperation in the world, where formal integration trails some distance behind the development of informal economic cooperation. A classic example of this is the Asia-Pacific, where, in the absence of formal cooperation, Japanese multinational production chains and informal networks in the Chinese diaspora become vectors of regionalisation (i.e. formal deals on the interstate political market). Approaches to regionalisation may differ widely, depending on the degree to which a "shared identity" exists in the region's countries and on the extent of their economic interdependence[13]. Regionalisation may reduce the cost of coordinating a common policy and encourage the formation of integration associations (thanks to the emergence of shared identity and intensification of the conflict of laws). The reaction of private structures is mixed: in some cases their desire for formal association increases, while in other cases the situation is more complicated (especially where there is a switch from negative integration, which culminates in the abolition of market barriers – to positive integration, which works towards the creation of common institutions). In countries where leading private structures pursue expansion into neighbouring markets, experience shows that there is a clear, positive link between regionalisation and formal integration (for example, NAFTA and integration projects involving the USA and Central America)[14].

Analysis of **integration by network** is a relatively new area of research and findings relating to the sustainability of regional network

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11 Whincop J., Keyes M. (2001) Policy and Pragmatism in the Conflict of Laws. Aldershot.

12 Olofsgard A. (2003) Incentives of Secession in the Presence of Mobile Ethnic Groups. Journal of Public Economics, Vol. 87.

13 Mattlin M. (2005) Structural and Institutional Integration: Asymmetric Integration and Symmetry Tendencies. Cooperation and Conflict, Vol. 40, No. 4.

14 Cox R.W. (1999) Explaining Business Support for Regional Trade Agreements // Frieden J.A., Lake D. (eds.): International Political Economy: Perspectives on Global Power and Wealth. Taylor & Francis.

agreements are limited[15]. Academic literature pays greater attention to the *homogeneity or symmetry of countries*. As far as it is possible to judge, sustainable integration cooperation networks are formed by relatively "similar" countries[16], these similarities existing mainly in their institutional systems. Similarity of institutional environment reduces transaction costs, making business operations in such countries more attractive to commercial bodies. In addition, the "similarity" of *institutional systems* facilitates the identification of policies which are shared by the integration group's member countries, reducing the effort required to uncover "shared" rules and institutions and adapt national policy to common standards.

Greater diversity between countries increases the scale of inter-sectoral trade between them and makes integration more attractive. Generally speaking, many modern integration groups (in particular, most North-North projects) are based on *intra-sectoral* trade with relatively similar states. However, in North-South integration *inter-sectoral* trade plays a key role[17]. It is important here to distinguish between diversity of *economic structure* and diversity of economic institutions – the former allows economies to complement one another, while the latter, on the contrary, complicates integration. However, it is the *economic institutions* which define a country's economic structure, and it is very likely, therefore, that countries with similar institutional systems develop similar economic structures. Empirical studies have in fact confirmed the link between sustainability, institutional homogeneity and successful integration[18]. The *complementarity of foreign trade structures* is also used in analysis of the sustainability of integration networks. Empirical calculations in this field have been carried out for CIS countries[19].

It is important to stress that, from the point of view of integration, it is the homogeneity of *institutional systems as a whole* that is definitive, rather than individual institutions. Institutions themselves seek complementarity, creating sustainable systems in which individual rules and norms, both official and unofficial, are interlinked. This tendency poses further problems for quantitative analysis.

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[15] Furasawa T., Konishi H. (2007) Free Trade Networks. Journal of International Economics, 2007, Vol. 72; Furusawa T., Konishi H. (2005) Free Trade Networks with Transfers. Japanese Economic Review, Vol. 56, No. 2; Goyal S., Joshi S.(2006) Bilateralism and Free Trade. International Economic Review, Vol. 47, No. 3; Mauleon A., Song H., Vannetelbosch V. (2006) Networks of Free Trade Agreements among Heterogeneous Countries. DP 2006-29 U Louvain Department of Economics.

[16] Das S.P., Ghosh S. (2006) Endogenous Trading Bloc Formation in a North-South Global Economy. Canadian Journal of Economics, Vol. 39, No. 3.

[17] Borrmann A. (1997) Interregionale Integration von Industrie- und Entwicklungsländern. HWWA-Diskussionspapier Nr. 45.

[18] Feng Y., Genna G. (2004) Domestic Institutional Convergence and Regional Integration: Further Evidence. In: Salavrakos I.D. (ed.) Aspects of Globalization, Regionalisation and Business. Athens: ATINER.

[19] Plekhanov D. (2005) Prospects for Development of Mutual Trade in SES. Ekonomicheskoye Obozreniye EEP, No. 2.

Assessing the Sustainable Size of Integration Projects in the Post-Soviet Space

Integration in the Form of International Union[20]

Let us begin by defining the optimal size of regional integration projects in the post-Soviet space where this concerns integration by international union. From the theoretical discussion above we conclude that improvements in the quality of governance within an integration grouping should encourage its growth by improving national aptitudes for coping with diversity. For the sake of simplicity we will assume that the quality of supranational institutions is a function of the quality of governance in individual member countries. This simplistic (but, we think, quite realistic) supposition allows us to conduct quantitative analysis of sustainability relating to the size of an integration grouping.

The sample group includes the 17 regional integration unions listed in a study by the European Central Bank in 2004[21]. This list covers practically all institution-based integration associations in the world. To determine the size of an integration group we take the combined populations of all its member countries in 2007 according to the US Census Bureau. To indicate the quality of governance we take the average of six Quality of Governance indices published by the World Bank in 2005. These indices are: the stability of the political system; the quality of economic policy; stage of development of a lawful state; the scale of corruption; the government's accountability to citizens; and the quality of state administration. In order to define the quality of governance in regional integration group we calculate the average of indices for all the member countries.

A summary of the data obtained is shown on Figure 1. The data show that there is indeed a link between population size and the quality of governance: regions in which the quality of governance is higher create bigger integration unions (solid line). However, this relationship is quite weak (there is a correlation of about 30%), which is attributed to the inclusion of integration groups in the Caribbean basin (ECCU and Caricom), which have small populations but enjoy high-quality governance. It is notable that this region is very fragmented and that great number of countries participate in integration groupings in this region. If we limit our analysis to nine integration groupings with a combined population of over 100 million people (the EU, NAFTA, Mercosur, ASEAN, the Andean Community of Nations, Africa's SADC, Ecowas and ECCAS and the Middle East's PAFTA), their interdependency becomes more sustainable (dashed line). The coefficient of correlation reaches about 65% in this

[20] *This chapter is based on a joint work of the author of this article with Dr of Economy L. Zevin (Institute of Economics, the Russian Academy of Sciences). This issue is studied in detail in Zevin L., Libman A. Optimal Economic Space: Problems of Size. Mir Peremen, No. 4.*

[21] *ECB Monthly Bulletin, 2004, October.*

case. For a paired regression analysis (the least-squares method) quality of governance is signal where the population of integration groupings changes by just 1%.

The results of the above analysis raises the question of whether or not it is possible to identify a "counterfactual" sustainable population size of an integration grouping based on the quality of its governance? This question is of great interest because of its relevance to the development of the post-Soviet space. The CIS has numerous regional and sub-regional integration structures. Should integration groups which include these countries target a sustainable population size based on the quality of governance in them, namely their ability to adjust to growing diversity and the efficiency of their decision-making? In order to define this indicator we calculated the average level of governance in post-Soviet groupings (using the approach outlined above) and employed it in a regression analysis of nine blocs with a population of over 100 million people. This procedure yielded a counterfactual indicator of sustainable population size for the countries in question.

We include four integration projects in our analysis: the CIS (where the mean level of governance is -0.86), the Single Economic Space (SES-4, i.e., Russia, Ukraine, Kazakhstan and Belarus: -0.71), the Eurasian Economic Community (EurAsEC-6: Russia, Belarus, Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan: -1.01) and EurAsEC-3 (Russia, Belarus and Kazakhstan: -0.81). SES-4 is now a somewhat theoretical entity, but we have included it in our analysis to allow for the possible involvement of Ukraine in integration processes. EurAsEC's indicator is far lower because the majority of its members are countries with a relatively low quality of governance. The counterfactual optimal populations of the relevant groupings calculated using the procedure described above are 218.5 million, 239.5 million, 225.5 million and 197.4 million people. The actual populations of these groupings in 2007, according to the US Census Bureau, were 278 million, 212.7 million, 206.6 million and 160.8 million.

A similar analysis was carried out using the function of GDP per capita (purchasing power parity) as an indicator of the degree of development and the size of an integration group. As previously stated, this parameter is the subject of theoretical debate. Due to the limited sample size we have examined only linear dependence: (improved levels of development increasing the "sustainable size" of an integration grouping). We used the same sample, and took the CIA Factbook (2006) as the source of information on GDP per capita. For each integration grouping, GDP per capita was calculated using the average GDP of individual countries (Figure 2).

The graph shows that there is a linear relationship for all groups except the Gulf Cooperation Council (GCC) – an association of Gulf

countries with small populations but which have substantial GDP due to their significant energy resources. All other regions fall into a linear dependence; the correlation coefficient is 42% for all groups and 62% for groups with a combined population of over 100 million people. In a paired regression, GDP is significant at 1% (for groups with a population of 100 million people) and 10% (for all groups). From regression analysis aimed at estimating the U-shaped dependence (which includes GDP per capita and squared GDP per capita as clarifying variables), all regressors are negligible.

Assessments of the counterfactual populations of the CIS, EurAsEC-3, EurAsEC-6 and SES-4 (GDP per capita is $5,775; $9,900; $5,717; and $9,150 respectively) calculated based on groups with a population of over 100 million people are 256.2 million people, 297.6 million people, 255.6 million people and 290.1 million people respectively.

We would stress that the proximity of results obtained to conclusions drawn on the basis of assessments of the efficiency of governance are unsurprising when we take into account the high correlation between GDP and the quality of institutions.

Figure 2.1
The link between the quality of governance and the population of an integration group

Source: compiled by the author
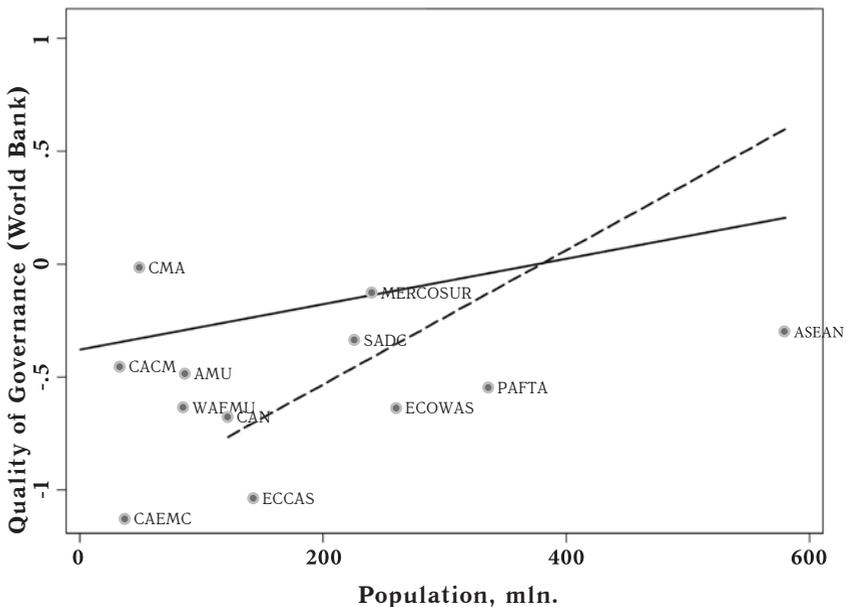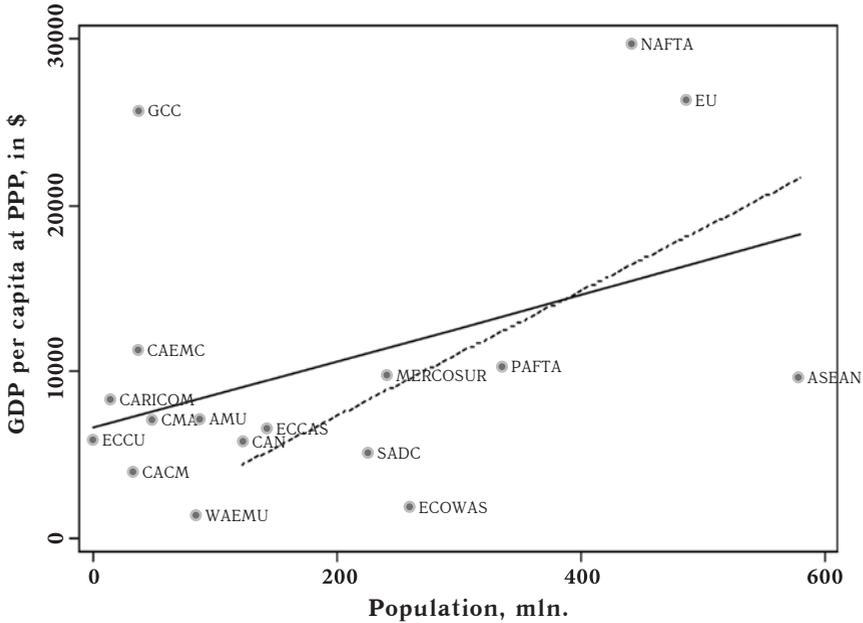
FIGURE 2.2
The link between GDP per capita and the size of population of an integration group

Source: compiled by the author

Aggregated results are shown on Figure 3. It is clear that, based on the criterion of the quality of governance, of all the integration groups, EurAsEC-6 is closest to its sustainable size. We can disregard the deviation, although the group is somewhat larger than its sustainable level. From the point of view of economic development, the EurAsEC indicator is significantly lower than its counterfactual sustainable size (which is less critical, however, than it being larger than its sustainable size, we deduce based on the aforementioned theoretical logic), but it is nevertheless closer to the counterfactual size than all other groups except for the CIS. The CIS is a little larger than its sustainable size, especially in terms of the quality of governance, which could call into question the group's ability to contend with inequality and thus to preserve stability. SES-4 and EurAsEC-3 are significantly below their sustainable size.
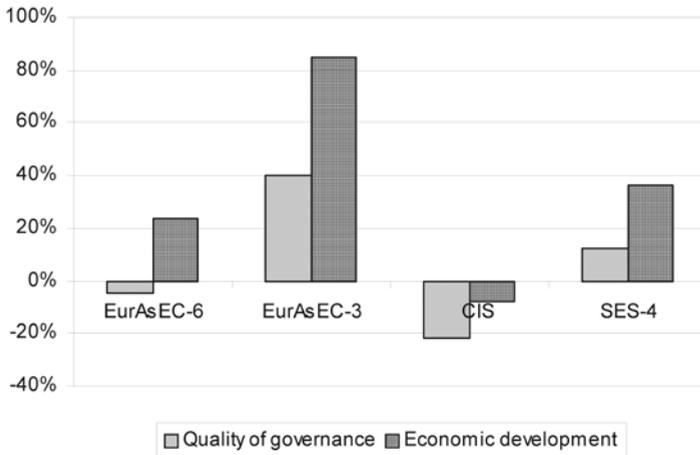
FIGURE 2. 3
Deviation of counterfactual size from actual size, % (+ means the counterfactual size is larger than the actual size; – means than it is smaller)

Source: compiled by the author

Integration as a Network

The most practical method of studying the comparative institutional inequality of countries is *hierarchal cluster analysis* – a way of grouping objects which are characterised by a vector of features according to their "similarity" as defined by an algorithm applied beforehand[22]. In this analysis we consider both structural and institutional characteristics of CIS countries. Structural characteristics are defined by the following 13 indicators: (1) GDP per capita (as a percentage of the average CIS level); (2) industrial output per capita (as a percentage of the average CIS level); (3) agricultural output per capita (as a percentage of the average CIS level); (4) retail trade spend per capita (as a percentage of the average CIS level); (5) foreign trade per capita (as a percentage of the average CIS level); (6) gross fixed capital to GDP, in percentage terms (as an indicator of investment); (7) manufacturing industry's share of gross value added; (8) services' share of gross value added; (9) the mining sector's share in industrial production; (10) the proportion of the population aged under 14; (11) the proportion of the population aged over 65; (12) unemployment as a percentage of the labour force; and (13) average annual population growth. The CIS Interstate Statistics Committee's data for 2005 were the primary source for this analysis. We use four indices to define *institutional systems* (data for the latest year available): the index of structural reforms published by the European Bank for Development and Reconstruction; the World Bank index of the quality of governance, mentioned in the previous chapter; the Heritage Foundation index of economic freedom; and the Freedom House index of political freedom. Where the relevant organisations publish several indices, we used the arithmetic average of these indices. All indices were recalculated to allow their highest value to correspond to the relatively higher quality of institutions.

The results of the hierarchal cluster analysis of the *economic and social structure of the post-Soviet countries* are shown on Figure 4a. The data show that CIS countries fall into two groups. The first group includes Belarus, Kazakhstan and Russia, which, our analysis shows, have relatively similar socio-economic structures. The second group includes other CIS countries. Some clusters comprise countries that are located geographically close to one another (Kyrgyzstan and Tajikistan) or countries of similar size (Armenia and Moldova). In this case, there is clearly a "nucleus" of major countries: Russia, Belarus and Kazakhstan (EurAsEC-3), which have similar economic structures.

The situation is different if we take the institutional systems of CIS countries as a basis for the hierarchal cluster analysis. The results of this cluster analysis are shown on Figure 4b. As in the previous analysis, CIS countries fall into two clear clusters. The first cluster incorporates two

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[22] *Methodological commentary on cluster analysis is given in: Libman A. (2007) Closest Neighbours: Cluster Institutions of Economic Development and Integration Prospects in Post-Soviet Space // Information and Analytical Bulletin of the Centre for Problems of Globalisation and Integration of the Economics Institute of the Russian Academy of Sciences, 2007, No 3.*

"post-colour revolution countries" (Georgia and Ukraine) and Moldova. This group corresponds the least to the economic and political institutional model established in the CIS. The second group comprises the other CIS countries, including politically similar ones, although it divides into three sub-groups. The first of these (Armenia and Kyrgyzstan) includes countries with a relatively liberal economic regime: Armenia is, according to most evaluations, a clear in the CIS in terms of its economic institutions, while Kyrgyzstan has also been successful in consistently pursuing a policy of liberal reform. Another cluster comprises Belarus, Turkmenistan and Uzbekistan – countries where the state plays the key role in effecting economic transformation, signalling almost complete rejection of liberal reforms and extremely limited privatisation. Russia, Kazakhstan, Azerbaijan and Tajikistan make up the third cluster of countries which have pursued moderately liberal reforms. Moreover, three countries in this group are energy exporters. Hierarchical cluster analysis shows that, in these terms at least, Kazakhstan and Russia are the two countries closest to one another in the former Soviet Union.

These results show that EurAsEC member countries often fall into different clusters in the post-Soviet space. The cluster analysis covered only six EurAsEC countries. We analysed the indicators in terms of structure and institutions, reproducing the results of Graphs 4a and 4b. This enables us to try to define the "optimal structure" of an integration network in the EurAsEC, without resorting to the option of bringing other CIS countries into integration projects. Proceeding from the *institutional structure*, stable agreements may be reached between Russia and Kazakhstan, and Belarus and Tajikistan. Kyrgyzstan and Uzbekistan are close to these two pairings but are not identical to them. The *economic structure* supposes that agreements may be achieved between Belarus and Kazakhstan, and Kyrgyzstan and Tajikistan; the EurAsEC-3 nucleus also stands out (Graphs 4c and 4d). However, though the countries are structurally very similar to one another, they differ in terms of their institutions: the "nucleus" institutionally similar countries comprises Russia, Kazakhstan and Kyrgyzstan.

In conclusion, we would point out that, in addition to the "conditional clusters" discussed in this article, we also observed so-called dynamic clusters which are useful in assessing the degree of similarity not of the current economic status of the CIS countries but of their evolution. The results are surprising: Kyrgyzstan turned out to be the closest to Russia in terms of the evolution of the country's institutions. Further research is needed to explain the results of this quantitative analysis.

FIGURE 2. 4
Cluster analysis of the post-Soviet space

Source: calculations by the author based on data released by the CIS Interstate Statistics Committee, EBRD, Freedom House, Heritage Foundation and the World Bank

Note: AZ = Azerbaijan, ARM = Armenia, BEL = Belarus, GEOR = Georgia, KAZ = Kazakhstan, KYRG = Kyrgyzstan, RUS = Russia, UKR = Ukraine, UZB = Uzbekistan, MOLD = Moldova, TAJ = Tajikistan, TURK = Turkmenistan. The axis of ordinates shows the difference between the countries of the integration group analysed.

(a): CIS – structure

(b): CIS – institutions

(c): EurAsEC – structure

(d): EurAsEC – institutions
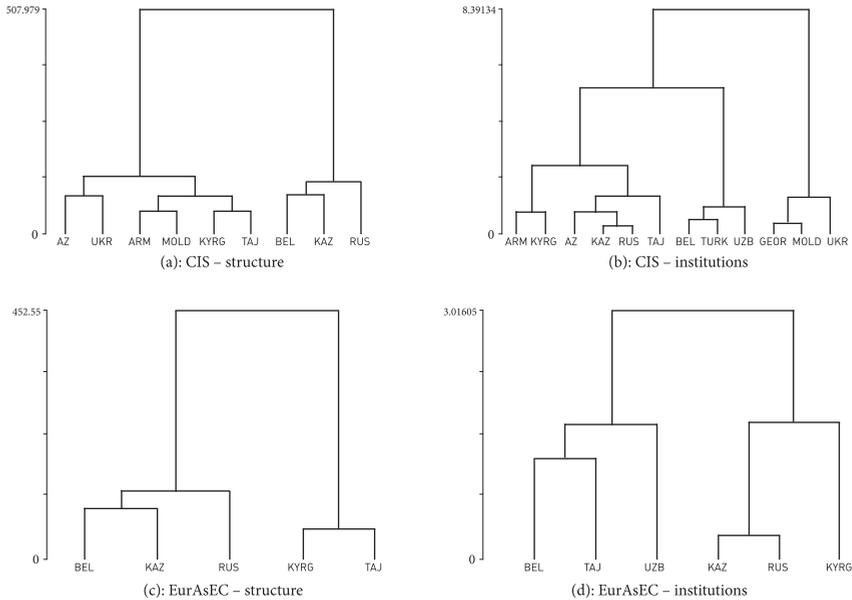
CONCLUSIONS

This paper attempts a quantitative analysis of former Soviet countries in terms of the "sustainable size" of a regional integration group. Counterfactual analysis of the concept of integration as the regional union for EurAsEC shows that the size of this group is close to, but nevertheless higher than its sustainable optimum in terms of the quality of governance and below the optimum in terms of economic development. Nevertheless, EurAsEC-6 is closer to its sustainable size (in terms of the quality of governance) than all other integration projects in the former Soviet Union.

We established pairs of countries that were capable of reaching stable agreements in terms of the concept of integration as a network. If we proceed from the supposition that the most sustainable integration groups are, generally speaking, those which include countries which are relatively uniform in terms of institutional structure, then the most "successful" integration project in these terms would be one based on cooperation between Russia and Kazakhstan.

Certain caveats must be mentioned. Firstly, our analysis has several technical limitations. In our regression analysis we considered only one indicator, and did not take into account all other factors which influence the stability and size of an integration groups (i.e., we violated the basic principle of econometrics – analysis based on the assumption that "all other conditions are equal"). The small sample size precluded the execution of a more precise study. Moreover, the cause and effect relationship is hard to discern: integration can be a factor that helps change GDP or

the quality of governance (the problem of endogeneity). We could not apply methods to overcome the problem of endogeneity, again because of the small sample size. We should not forget that the very existence of regional integration projects which are covered by the media and discussed by the public has an impact on developing regional identity, which is an important factor in the regionalisation of an economic space and the sustainability of integration. In this regard, we believe that even the "unfavourable" conclusions of this analysis cannot be used as the basis for assertions that any particular group or network has no future. On the contrary, once past the point of unsustainability (owing to a lack of political will, for example), the integration structure may influence the structure's member countries such that this automatically lead to the emergence of a sustainable economic configuration. However, it is hard to move through this phase with any speed.

There are also significant conceptual limitations to our analysis. Firstly, our conclusions do not necessarily mean that a certain project is the most *likely to succeed*: we can only say that *where it is achieved*, to all appearances it may become more sustainable. This is particularly the case in our analysis of networks. In our analysis we ignored, for example, the clearly significant factor of the geographical locations of countries. However, we do not think that our conclusions are unrealistic; for example, cooperation between Russia and Kazakhstan has already become an important impetus to the development of integration initiatives. Political and economic issues were also ignored in this analysis. Nevertheless, the results of studies conducted show that, regardless of the similarity of institutions and preferences, interstate conflicts can have a significant impact on the type and extent of regional integration[23].

It is also vital to stress that, in many cases, sustainability is not synonymous with efficiency. Often, the continued existence of an integration group is not linked to its progress towards integration. For example, in conducting the regression analysis we did not consider the level of integration within individual communities, which can vary hugely. Even the intra-regional trade indicator ranges from less than 10% to over 70%[24]. We believe that the factors described in this analysis have an equal influence on projects that may be very different in terms of their progress and integration aims; regionalism in its newly revived form makes it extremely hard to draw a clear boundary between the "degrees of integration" identified by Balassa (a free-trade zone, a customs union, a common market and an economic union): except, perhaps, for the EU, no other integration group fits this outline in terms of its development. Furthermore, we should bear in mind that the sustainability of a project and its progress towards integration are not the same as its effect on

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[23] *Vicard V. (2007) Trade, Conflicts, and Political Integration: Explaining the Heterogeneity of Regional Trade Agreements. Mimeo.*

[24] *ECB Monthly Bulletin, October 2004, page 69; Sa S., Strauss-Kahn M.-O., Bonzom Ph. (2006) Interaction between Regional Economic Integration and Institutional Integration: the European Experience. Banque de France Bulletin Digest , No. 145, January, p. 10.*

economic and especially institutional transformation; on the contrary, an integration project may become an obstacle to necessary reform.

One alternative to our analysis is the definition of an optimal (rather than sustainable) size of integration based on economic development issues and state policy. An example of this analysis is "optimal currency zones". Studies of these zones focus on the correlation between the advantages of adopting single currency and the potential crises which can result from it. "Optimal legal zones" are those in which the advantages of relatively low external trade transaction costs are compared with the costs of expanding the area in which generic legal standards are applied[25]. These studies have also been conducted for CIS countries[26]. However, the sustainability of an international union also generates interest from a legislative point of view. Even if an integration grouping does not have a positive impact on the process of integrating national economies, it nevertheless forms a certain "institutional platform" upon which to base negotiations further down the line, which may then strengthen cooperation between countries as circumstances change. The experience of Latin American countries and the Arab world shows that integration groupings often "wake from slumber" and become highly effective actors in the international arena.

Finally, there have been cases in the world where the efficiency and sustainability of a union undermine one another. The problem is twofold. On the one hand, the attractiveness of an organisation may increase its sustainable size, boosting the number of members and their diversity. But it is precisely this factor that can reduces its efficacy (governance fails to cope with the increased diversity)! APEC is a classic example of this problem. On the other hand, "tiered integration" may lead to serious problems for the sustainability of an integration group if this is applied to the institutions within that group[27]. The implementation of a tiered project often results in the effective refusal to include "lower-ranked" members in the integration process, even in the long term. In other words, unrestricted growth or extreme restriction of the number of members may undermine the efficiency and sustainability of integration in the long term, even though it appears to have been achieved now.

As well as being sustainable spatially, the structure of an agreement can also have temporal sustainability. This would apply to the formulation of open-ended agreements or the introduction into their content of

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[23] Vicard V. (2007) Trade, Conflicts, and Political Integration: Explaining the Heterogeneity of Regional Trade Agreements. Mimeo.

[24] ECB Monthly Bulletin, October 2004, page 69; Sa S., Strauss-Kahn M.-O., Bonzom Ph. (2006) Interaction between Regional Economic Integration and Institutional Integration: the European Experience. Banque de France Bulletin Digest , No. 145, January, p. 10.

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[26] Drobyshevskiy S., Polevoy D. (2004) Problems of Creating a Single Currency Zone in CIS Countries. Moscow, Institute for the Economy in Transition.

[27] Bordignon M., Brusco S. (2005) On Enhanced Cooperation. Mimeo.

specific time limits, which allow for future revision resulting from new negotiations. The long-term nature of agreements is vital in providing an incentive for investment, while their short-term nature ensures greater flexibility in case of external disruption. The nature of goods supplied also influences the structure of agreements: long-term agreements are more attractive when benefits are very diverse[28]. Consequently, the structural sustainability of an agreement in temporal terms depends both on the need for investment to develop infrastructure and the agreement's susceptibility to external disruption. On the one hand, long-term infrastructure projects (for example, in the transport, power engineering or water industries) play an important role in enhancing cooperation between former Soviet countries, and this requires long-term agreements to minimize risk. On the other hand, studies show that in the currency integration scenario, the financial systems of some CIS countries would not be able to withstand external disruption[29]. This issue needs to be studied further.

Nevertheless, from this analysis it is possible to draw certain preliminary conclusions which can inform policy making as it affects regional integration in the post-Soviet space. In the long-term, this study can be regarded as the forerunner of further studies conducted to establish the "size" and "structure" of an integration project which is best reinforces its sustainability, efficiency and ability to execute projects.

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[28] *Guriev S., Klimenko M. (2007) Duration and Term Structure of Trade Agreements. Mimeo.*

[29] *Drobyshevskiy S., Polevoy D. (2007) Financial Aspects of Currency Integration in the CIS. Moscow, Institute for the Economy in Transition.*