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SPECIAL ISSUE EDITORIAL

Innovative potential for development of Europe's neighbouring countries and regions

Edward M. Bergman[1] · **Attila Varga**[2]

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Abstract The European Neighbourhood Policy (ENP) is intended to promote development in bordering states and regions positioned along a broad arc from Morocco to Ukraine to become more friendly, stable, and prosperous. The policy offers limited but attractive terms of association with selected non-EU members concerning trade, mobility, innovation, and assistance in exchange for the adoption of important Western features that comprise the *Community Acquis*. The theme of this special issue hews closely to the economic development goals of the ENP by examining forces and factors that underlie the ability of neighbouring regions and countries to acquire and exploit innovative technologies, which are seen as the key element of a successful ENP.

This special issue attempts to illuminate key innovative factors that underlie the fragile but important relationships between Europe and its immediate regional neighbours during the EU post-accession period. These relationships have been systematically cultivated since 2004 under the auspices of what has become known as the European Neighbourhood Policy (ENP), which is intended to promote development in bordering states and regions positioned along a broad arc from Morocco to Ukraine to become more friendly, stable and prosperous. The policy offers limited but attractive terms of association with selected non-EU members concerning trade, mobility, innovation, and assistance in exchange for the adoption of important western features that comprise the *Community Acquis*. In short, limited integration and privileged advantages are offered in exchange for becoming more like their Western neighbours. A negotiated quid pro quo is set in motion with the signing of an EU Association Agreement that lays

✉ Edward M. Bergman
edward.bergman@gmail.com

1 Vienna University of Economics and Business, Vienna, Austria

2 University of Pecs, Pécs, Hungary

out the specific bilateral terms between the EU and each of the associated countries (Wesselink and Boschma 2017).

In over a decade since the introduction of the ENP, there have been radical changes in the forms of conflict, rising extremism and terrorism, human rights violations, aggression at borders, and economic upheaval in a large number of the countries that surround the EU. In the meantime, the EU's own interdependence with its neighbours and among its own members has been placed in sharper focus. These changes resulted in the review of the ENP in November 2015 in order to build more effective partnerships between the EU in its neighbourhood. Differentiation and greater mutual ownership of activities will be the hallmark of the new ENP, recognising that not all partners aspire to EU rules and standards, and reflecting the wishes of each country concerning the nature and focus of its partnership with the EU. The proposed joint priorities for cooperation in the review of the ENC include economic development, the security dimension, migration, and mobility (European Commission 2015).

A large number of scientific papers and articles concerning the ENP were produced during an ambitious research project undertaken for the European Commission[1] to better understand effects of various integrative incentives on the European Neighbouring Countries (ENCs). The project consisted of 17 research units in 14 countries. The disciplines of economics, geography, regional science, sociology, politics and law were assembled to examine the dynamics of these ENP dimensions for as many countries and regions as possible (Surinach 2014). Over 100 scientific working papers were produced, many of which in revised form comprise this and other special journal issues.

Examining the ENP at a general level, Boschma et al. (2017) assemble a broad overview of the relationships among EU and ENCs across several thematic dimensions, including flows of people, goods, capital and knowledge. From a different perspective, several key findings and overall policy conclusions from the SEARCH project were geared to a non-scientific policy-oriented readership (Sinozic et al. 2015). Focusing their special issue on human capital, migration and social capital, Beenstock et al. (2015) stress the importance of ENCs as a key source of future labour force and economic growth in the European Union. The traditional channels of integration (trade and FDI) comprise another special issue that stresses the importance of collateral developments in governance, quality of institutions, human capital and technological upgrading to truly deepen economic and trade relations among neighbours (Crescenzi and Petrakos 2016).

The theme of this special issue hews closely to the economic development goals of the ENC and to the overall research question embedded in the project title: *S*haring Knowledg*E* *A*ssets: Inte*R*regionally *C*ohesive Neig*H*bourhoods (SEARCH) by examining forces and factors that underlie the ability of ENCs to acquire and exploit innovative technologies. That theme is examined here in a series of scientific articles, which examine the policy focus seen as most directly responsible for successfully pur-

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suing the ENP.[2] Data mining of 100+ SEARCH project papers revealed patterns that underline the singular importance of innovation, which was subsequently reinforced by key ENC informants who scored various policy options and who clearly preferred innovation approaches (Sinozic et al. 2015). Modelling support of the innovation theme is available in the form of an ARS article intended for this special issue (Varga and Baypinar 2016). The authors applied the GMR-Turkey policy impact model in a representative ENC region to estimate the likely regional effects of a selected set of policies suggested in the European Neighbourhood Policy (ENP) literature. Policy options were grouped into two alternative sets of measures, which became the bases of two alternative scenarios of regional economic development: the Conservative scenario and the Technology and innovation-based development scenario. Results from the model suggest that a persistent and systematic long-term regional technology development-based economic policy that applies measures such as investment (Crescenzi and Petrakos 2016), education Matano and Ramos (2016), R&D support Badillo and Moreno (2016), and increased physical accessibility to developed markets could in the longer run result in higher levels of regional and national production together with fewer interregional differences than a scenario that would support the expansion of traditional industries in the region.

One approach to promoting innovation beyond existing ENC industries and sectors would attempt to learn from their trade interactions with their more advanced partners. The article by Gonchar and Kuznetsov (2016) examines how Russian manufacturing firms pursued technology innovation in response to knowledge embedded in imports. The research is based on the data from two surveys of manufacturing companies performed in 2005 and 2009. The findings show clearly the beneficial effects of importing on Russian innovation. Previous involvement in the importation of equipment and intermediates leads to future innovation, and there is evidence that manufacturing equipment firms continue to favour imports and engage in innovation over time, particularly those operating in competitive sectors. The learning effects from importing seem to be higher for product than for process innovation, perhaps because reverse engineering of innovative imports is unproductive when trying to understand processes. The decisions of firms to invest in innovation via imported embodied knowledge and to import are also sensitive to their geographic location, technology position, pressure from import competition, and efforts to conduct R&D, all of which are useful considerations when designing ENP policy instruments.

Innovative spillovers also arise in cases where firms collaborate on R&D projects that offer mutual benefits to improve both production processes and product design. The article by Badillo and Moreno (2016) estimates the impact of collaboration in innovation activities with partners in different geographical areas on innovative performance. By using the Spanish Technological Innovation Panel, this study provides evidence that the benefits of collaboration differ across different dimensions of geography. They find that for Spanish firms, the impact of *extra*-European cooperation on innovation performance is larger than national or European cooperation. Firms therefore tend to benefit more from interaction with *distant international* collaborators to

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access new technologies or specialized and novel knowledge than from local interactions. Evidence of the positive role played by absorptive capacity was also found, which implies a higher premium on the innovation returns to cooperation in the international case and particularly with European collaborators. Extrapolating to ENCs, there may be added benefits to collaborating on R&D projects with non-adjacent EU or other firms.

Inventive activities of all kinds help stimulate the awareness of and search for innovative opportunities, which raises the question of how inventive activity itself might be stimulated. Here, Akçomak et al. (2015) investigate the effect of trust on inventive activity. They test the concept of generalized trust and about 20 other trust (and trustworthiness) related indicators to investigate which trust-related variables best explain inventive activity in 135 regions of 20 European countries with a special focus on causal, non-linear, and spatial forces. Findings indicate that only generalized trust and non-egoistic fairness have robust effects on inventive activity in Europe. Using historical data on the extent and existence of universities as instruments, a causal relationship between trust and inventive activity is set up. Even after controlling for causal, spatial, and non-linear forces, there remains a significant direct impact of trust on inventive activity. The result shows that a one standard deviation rise in general trust (a 12.5% rise in the trust level) increases patents per million inhabitants on average by 2%. Despite the growing literature that connects social capital to inventive activity at the regional level and across space, the direct policy implications available here are as much suggestive as they are unambiguous. They lead one to consider pursuing further investigations into the "knowledge cohesion" of regions, particularly those that increase absorptive capacities and also expand social capabilities through regional learning of sound policymaking to enhance knowledge spillovers and transfer in ENCs.

The literature on immigrant remittances (Zhunio et al. 2012; Edwards and Ureta 2003; Lopez-Cordova 2005; Mansour et al. 2011; Amuedo-Dorantes and Pozo 2010; Bansak and Chesum 2009; Calero et al. 2009) generally takes into account the impact of remittances on education at a national level, leaving unexamined the possibility of heterogeneity of educational impact across regions within a country. However, if regions within a country differ in their degree of economic development or in other economic features, as well as migration patterns, it is likely that the relationship between remittances and education will be heterogeneous across regions. The article by Matano and Ramos (2016) analyzes the relationship between the receipt of remittances and attendance at higher education institutions, taking into account the direct impact of migration on this relationship. Their focus is on Moldova, an interesting ENC country where temporary migration is more common than permanent migration, and it is further characterized by a high share of migration in the economically active population and where remittances constitute around 30% of the gross domestic product (GDP). The analysis uses household data from the 2006–2008 *CBSAXA Moldovan Household Survey* provided by the Kiel Institute. The unit of analysis is household members in Moldova's capital Chisinau, plus 32 rayons/districts. Findings show that, on average, remittances are associated with an average 5.4% point increase in the likelihood that young individuals will pursue higher education, although as expected this result is widely heterogeneous across regions. The formation of human capital in ENCs is pre-

cisely the type of result intended by the EU, which helps fortify a region's absorptive and social capacity to pursue relevant innovations.

The well-known influence of urban density and supportive infrastructure to propel innovation-led growth is also relevant in ENCs. Papers by Castells-Quintana and Royuela (2016), and Kallioras et al. (2016) investigate agglomeration tendencies in the EU neighbourhood. Castells-Quintana and Royuela examine how urban concentration and infrastructure interact to encourage economic growth, and second whether policies promoting infrastructure consider the spatial distribution of economic activity. Taking the European Investment Bank (EIB) as a case study, those projects that finance infrastructures for both the European Union and the EU neighbourhood are analysed with panel data that considers different measures of infrastructure. Their results suggest a relevant role of connectivity infrastructure (i.e. transport and communications) for agglomeration benefits to take place in Europe's neighbouring countries. Despite the importance of regional differences, the results also suggest that EIB funding in ENCs is only country specific and displays no evidence of spatial consideration. The lost opportunity to use regional factors in supporting infrastructure is available for policy recapture, assuming EIB and other policy instrument institutions can be coordinated effectively within the evolving ENP umbrella.

The countries affiliated with the European Neighbourhood Policy (ENP) have experienced significant socio-economic transformations and disconcerting instances of recent social and political turmoil. This only adds to the social and economic pressures that degrade processes of market liberalization and economic integration previously set in motion at least partly by the ENP process itself. Under such conditions, questions of spatial cohesion, and thus of regional convergence and divergence, become increasingly salient for the legitimacy and successful implementation of the reforms aimed at market liberalization and economic integration. In their paper, Kallioras, Monastiriotis, and Petrakos examine the spatial dynamics of population growth in the ENP countries prior to the recent destabilization in the region, using two complementary approaches—an analysis of the impact of agglomeration on growth and an analysis of club formation in population concentrations (convergence–divergence). On the whole, the ENC South in recent years displayed evidence of regional convergence, in the sense that population became more diffused across regions, unlike the ENC East which exhibited stronger and more consistent evidence of regional divergence (increased concentration of population). These findings suggest that agglomeration and cumulative causation forces operate more strongly in the closer countries of the ENP East, where the gravitational "pull" of the EU economy is stronger. At the very least, it seems likely that future ENP must distinguish its measures more carefully by East vs. South, particularly those that depend heavily upon agglomerative forces.

The objective of the article by López-Tamayo et al. (2016) is to analyse the recent evolution of the ENC by looking at GDP growth and also by considering different dimensions related to economic performance in a broader sense, particularly social progress and institutional reforms. The ENC performance along these different dimensions is compared with that experienced by a wide sample of economies including developed, developing, and emerging economies. In order to facilitate this comparison, a new multi-dimensional index is built in the paper in order to analyse the economic, social, and institutional performance of ENC compared to a wide sample

of developed and developing economies. However, the indicator breaks into simple indicators, which can also help policy makers understand the strong and weak points of their economies and, if required, to simulate the results of different economic policies. As highlighted by Dodini and Fantini (2006), the economic effects of the ENP hinge on three interrelated channels–structural reforms, macro policy anchor, and trade and factor movement–that allow neighbouring countries to benefit in the long run from positive impacts that would reduce their current gap with EU member states. This analysis considers the potential effects of these ENP policy channels on the relative evolution of ENCs. The results reveal different trends, varying by the specific policy dimensions and heterogeneous effects at the country level. From a policy perspective, these results reinforce the validity of bilateral EU-ENC action plans promoted by the ENP by acknowledging the different starting points and particular characteristics of each neighbouring country.

Helping neighbouring states and regions to become more friendly, stable, and prosperous depends upon their ability to tap innovative sources of development. The generation and exploitation of the newest innovations remains the province of advanced countries and regions, others following as they become capable of deploying valuable innovations. As discussed above, there are many facets of development to upgrade and enlarge before Europe's neighbours can take better advantage of innovative potentials lying at their borders.

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