



## DELIVERABLE 2.2

### Complete report on patterns of economic interaction between the European Union and its neighboring countries

September 2013

#### OBJECTIVE

Deliverable 2.2. is a complete report on patterns of economic interaction between the EU and the ENP countries, submitted for review to the European Commission in line with the structure of Annex I to the Grant Agreement. Deliverable 2.2. includes the following Working Papers: a) WP2/06: Trade activity between the EU and the ENP countries: A “reproduction” of the “core-periphery” pattern? (author: Dimitris Kallioras); b) WP2/07: The geography of trade relations between the EU and the ENP countries: Emerging patterns and policy recommendations (authors: George Petrakos, Dimitris Kallioras and Panagiotis Artelaris); c) WP2/08: The determinants of trade activity among the EU and the ENP countries (authors: Dimitris Kallioras and George Petrakos); d) WP2/09: Mind your step: The heterogeneous effect of relatedness on the diversification process in EU and ENP countries (authors: Ron Boschma and Gianluca Capone); e) WP2/10: The European firms’ export activity to the neighboring countries (authors: Anna Maria Pinna, Fabiano Schivardi and Vania Manuela Licio); f) WP2/11: Has EU trade fostered economic growth in the ENP countries? A dynamic panel analysis (authors: Ageliki Anagnostou, Dimitris Kallioras and George Petrakos); g) WP2/12: MNEs location decisions in EU neighboring countries and economic institutions (authors: Andrea Ascani, Riccardo Crescenzi and Simona Iammarino); h) WP2/13: Origin of FDI and domestic productivity spillovers: Does European FDI have a “productivity advantage” in the ENP countries? (authors: Vassilis Monastiriotis and Mireia Borrell); i) WP2/14: Location choices of multinational companies in Ukraine (authors: Daria Zvirgzde, Daniel Schiller and Javier Revilla Diez); j) WP2/15: Impacting innovation behavior of foreign and domestic firms: The case of Ukraine (authors: Daria Zvirgzde, Daniel Schiller and Javier Revilla Diez); k) WP 2/16: Regional inequalities in the European Neighborhood Countries: The effects of growth and integration (authors: George Petrakos, Dimitris Kallioras and Maria Tsiapa); l) WP2/17: The effect of FDI on regional inequality in the ENPs (authors: Michael Beenstock, Daniel Felsenstein and Ziv Rubin). Together, these Working Papers inform both the empirical direction and the theoretical underpinnings of WP2 of SEARCH Project. Each Working Paper has a Policy Notes addendum i.e. a 2-3 pages text consisting of 3 parts: a) objectives of

research in reference to policy; b) scientific/research methods; and c) policy value-added. Each Policy Notes text has contributed to the preparation of the Policy Brief texts, which refer to the Tasks of Deliverable 2.2. The Policy Brief texts incorporate the policy implications of the research findings, easing, thus, the (effective) communication with the policy-makers.

## MAIN RESULTS

Deliverable 2.2. consists of 12 Working Papers which synthesize the work done on patterns of economic interaction between the EU and the ENP countries. Together, these Working Papers inform both the empirical direction and the theoretical underpinnings of the 2nd Work-package of SEARCH Project. In particular, each Working Paper provides a theoretical discussion and an empirical analysis of economic interaction patterns between the EU and the ENP countries.

WP2/06, examining the EU-ENP trade activity under a macro-scope perspective, reveals that for the vast majority of the EU-ENP country pairs either there is a neutral relation or the EU countries dominate over the ENP countries. Such finding provides strong support to the argument that the DCFTAs contribute to the “reproduction” of the well-established “core-periphery” EU spatial pattern of development in the EU-ENP economic space. Clearly, the EU-ENP trading area reminds of a “hub-and-spoke” system that consolidates a spatial pattern of unequal (trade) relations between the EU and its neighbors. This makes evident that the neoclassical-type position that the market forces released in the process of economic integration (or even under the tantamount conditions of “neighborhood” Europeanization) are, overall, beneficial for the least developed economies, leading, thus, to greater cohesion, is difficult to verify.

WP2/07, examining the geography (i.e. size, direction, composition) of the EU-ENP trade relations, observes the diminishing importance of the EU in the ENP trade shares (even though the EU remains the main trade partner of the ENP countries), the low importance of the ENP countries in the EU trade shares (the vast majority of the EU trade is intra-EU) as well as the low intra-ENP trade shares (an indication that the ENP area is still fragmented with weak demand-supply chain links). These trends may attribute to that the fact that the EU-ENP trade relations have been evolved in a rather uneven, unbalanced and asymmetric way. This is so as the ENP countries are locked-in an inter-industry type of trade integration with their more advanced EU counterparts. This type of trade relation, an outcome of the inability of the ENP countries to compete in markets for capital-intensive and/or knowledge-intensive activities, even though it provides an alternative (and perhaps the only feasible) route for the exploitation of the locally available skills, is not in a position to guarantee (generate) prospects for long-term income convergence. Especially for the ENP countries that do not exhibit comparative advantage in the sector of fuel primary commodities, this type of trade relations provides strong implications (given the recent experience of the Southern EU member-states) that trade deficits may be, quickly, “converted” into fiscal deficits. Hence, considering the fact that the ENP area is sensitive in economic (i.e. low welfare level) and in demographic (i.e. high presence of rural population) terms, the current perspective of the ENP may push the (non-fuel producing) ENP countries to gravitate towards different trade poles (e.g. the BRICs) that offer less uneven, less unbalanced and less asymmetric trade relations.

WP2/08 indicates that the gravitational logic applies to the EU-ENP trade activity, and in particular to the exports from the ENP countries to the EU. High levels of GDP and population, in the ENP and the EU countries, low distance, low income differences, common land borders and colonial relations in the past are among the factors favoring the increase of exports

from the ENP to the EU countries. Otherwise, the EU-ENP trade activity is hindered. In particular, the estimator of the GDP of the ENP countries, though positive, indicates the inability of the ENP countries to diversify and expand their export bases, implementing export-led growth strategies. Definitely, the inability of the ENP countries to compete (successfully) with their more advanced EU counterparts in the markets for capital-intensive and knowledge-intensive economic activities cannot produce long-term income convergence. The positive estimator of the population of the ENP countries indicates high potential to export. This finding is a signal for the EU to create, through its external trade policy, conditions favoring the ENP exports to the EU market. The reluctance on behalf of the EU to remove its tariff barriers, especially the ones imposed on agricultural products, does favor trade creation conditions, raising major hurdles for the ENP countries to export, to the EU market, the products on which they, mainly, specialize. Moreover, the negative sign of the estimator of distance, between the EU and the ENP countries, indicates that the ENP exports to the EU countries are not spatially dispersed all over the EU market. In contrast, they present strong trends of spatial concentration since adjacency exerts a strong influence in the formation of trade areas, whereas distance has a negative effect on trade activity. Of course, since the EU-ENP trade area is not without (natural or/and artificial) barriers to interaction, there are cases exhibiting a geographical pattern which is not “normal”, in the sense that the direction of ENP exports is not driven (explained) solely by the parameters captured in the corresponding gravity model. Geographical irregularity (bias) in the pattern of ENP exports exerts a negative, though not strong, impact on the economic performance of the ENP countries. At this point, it has to be stressed out that for many ENP countries (mostly for many ENP East countries) the launch of the ENP led to the normalization of the patterns of trade activity with the EU (and especially with the new EU countries).

WP2/09 investigates the process of diversification of the EU and the ENP countries, analysing the degree of relatedness between exports products, conducted on the basis of co-occurrence analysis. The results obtained confirm the path-dependence in the diversification process. This means that all EU and ENP countries tend to jump into new industries that are related to their current productive structure, because they can exploit the existing capabilities. However, the effect of density is much stronger in the case of the ENP countries, signalling the existence of different types of capabilities. In particular, EU countries are, also, able to diversify into less related industries because of general-purpose capabilities, while the ENP countries have to rely much more on the relatedness between products and the specific capabilities necessary to produce them. Moreover, it is revealed that imports may have an impact on the trajectory of the productive structure of countries, provided that absorptive capabilities exist. However, in practice, only EU countries are able to diversify into sectors related to their imports. The productive structure of trade partners, instead, does not have any impact on the diversification process, but it provides economic incentives to both EU and ENP countries to keep producing in old sectors that are related to what their partners do. The analysis on country diversification suggests, however, that, although path dependence matters, there is still the possibility that the network of relations in which countries are embedded might change the direction and the intensity of the process.

WP2/10 conducts an analysis at the level of firms, following a micro-scope perspective, and suggests that there is potential for the ENP countries to strengthen their links with the EU countries. The findings of the analysis indicate that even though about 70% of the EU firms are exporters, of these less than 6% have the ENP countries as main (i.e. first, second or third) export destination and just 2% decide to have an ENP country as their first export destination. The analysis stresses out the fundamental role of geographical and cultural proximity on explaining where EU trade flows are addressed. Focusing on the

specific characteristics (such as the level of employment and the level of productivity) of the EU firms exporting to the ENP countries, no significant differences can be traced, comparing to the corresponding firms exporting to other (than the ENP countries) export destinations. Exploring on intensive and extensive margin, it seems that exporting areas affect differently firms' propensity to export as well as firms' amount of exports. EU firms trade mostly with other EU firms (verifying that EU trade is mostly intra-EU), even though in size (quantity) terms exports outside the EU are much more consistent. Especially looking at extensive margin, the decision on behalf of EU firms to export (or not) is primarily affected by intra-EU trade.

WP2/11 analyses the impact of the EU-ENP trade activity on the performance of the latter, and makes evident that the long-run causality between trade indicators (i.e. indicators of openness and integration) and growth runs depends on the EU trading partners. While the higher-income subpanel (i.e. EU core) shows a negative causality, the lower-income countries (i.e. EU periphery) exhibit a positive relationship between growth and trade indicators. Indeed, in terms of trade openness and integration, the analysis shows that trade expansion with the EU contributes to ENP growth mainly when it concerns trade with the middle and low income EU members, that is, the Southern and the Central-Eastern EU members. In their case, the expansion of trade as a share of GDP is beneficial for ENP growth. On the contrary, when the expansion of trade as a share of GDP is related to the high income EU members, the impact on growth is negative. The analysis also shows that with existing productive capacities and structures, ENP GDP growth stimulates the expansion of trade relations as a share of GDP only with the middle and low level of income EU member states. Hence, the growth-led openness and openness-led growth hypotheses can only be supported for lower-income EU traders. Given that the EU-ENP trade relations represent a "North-South" type of integration, this is a finding of extreme importance, casting doubt on the mainstream win-win models of trade and development.

WP2/12, controlling for traditional drivers of location behavior, provides evidence for the significant role of institutions as regards the mobility of capital from the EU to the ENP countries. However, not all aspects of host countries' economic institutional environments matter the same degree. Economic institutions are distinguished to those related to government expenditure, to property rights, to legal system, to monetary aspects and to regulations in markets. While economic institutions related to government expenditure, to property rights, and to legal system affect positively the decisions of foreign investors to undertake operations in the ENP countries, the others do not seem to be relevant drivers. Of course, there are standard elements (such as the size of host markets, market potential, agglomeration forces, trade costs and geography, wages, and education levels) that, also, contribute to shape MNCs' strategies. Moving a step further, it is interesting that heterogeneity in MNCs' preferences over economic institutions occurs in location strategies. It turns out that the indicators for property rights, legal system and monetary institutions are subject to a certain degree of taste variation in MNCs' preferences. As far as heterogeneity in monetary aspects of economic institutions are concerned, it might be that there are underlying differences at the MNCs' individual level with respect to the modes of financing subsidiaries' activities. Therefore, MNCs that undertake operations in locations with higher rates of inflation may set up affiliates that borrow money externally from local financial markets rather than internally from the parent company. Importantly, most MNCs prefer locations where economic institutions are better enforced.

WP2/13 examines the size and direction of productivity spillovers, generated by EU and non-EU FDI, accruing to the domestic economies and offers a plethora of interesting findings. The paradigm of the ENP East countries, in particular, suggests that EU-originating FDI appear to have a "productivity advantage" over investments from other parts of the world, in the sense

that it tend to generate greater productivity spillovers for domestic firms or, at least, less significant negative effects. Although theoretically it is possible that this result may emanate purely from technology and other advantages possessed by EU firms relative to other investors, in practice it is difficult to argue that EU MNCs would be systematically more advanced than MNCs of other origins. If this is true, then it can be argued that at least part of this productivity advantage must be related to the process of EU association, which gives a preferential access to EU firms in the host economies and harmonizes their institutional and legal environment. Of course, FDI spillovers, including EU ones, have not reached their maximum value in the ENP region. The paradigm of Southeastern European countries, where the involvement of the EU is magnified, indicates that such spillovers are very positive and strong, despite the fact that the recipient countries sharing similar problems of institutional quality and absorptive capacity with many of the ENP countries. This, in turn, suggests that further approximation with the countries of the ENP region and further intensification of economic links and capital flows may prove to be increasingly beneficial for the domestic economies. Of course, at this point it has to be stressed out that the observed productivity spillovers, although not particularly localized, tend to be significantly stronger and more positive for firms located in the capital-city regions of the recipient countries, irrespective of the location of the foreign firms. As FDI tends to concentrate in, or near, capital cities anyway, it follows that it, indeed, acts to amplify within-country spatial disparities. This finding raises important concerns about the role and consequences of foreign capital inflows as the processes of transition, development and internationalization (openness) are long-known to be related to widening regional disparities. This is so as, at least in their initial stages, they benefit the most dynamic, extrovert and human-capital abundant parts of an economy.

WP2/14, focusing on Ukraine, shows that market seeking investors will most probably invest in the capital region, Kyiv, rather than in the bordering regions, Lviv and Kharkiv. Large market potential, better access to resources and higher institutional quality of the capital will attract greenfield investors. Close to the EU border, Lviv region except for having an absolute advantage of being proximate to the EU border, pulls in investors due to its human capital concentration. These findings go in line with an assumption of the less post-Soviet legitimacy of the western region Lviv, whereas in close to the CIS border region Kharkiv the old industrial infrastructure as the remains of the planned economy is still present. This leads to the attraction of the foreign investments originating from CIS to serve the local market with pre-established customer-supplier networks. Overall, better institutional quality of the capital region results in the attraction to the latter of FDI firms assessing institutional environment at the current location as of good quality. This supports the argumentation of the importance of the institutional environment as a pull factor for FDI inflows, but also indicates an uneven government support of regional economic systems, leading to a disproportional regional development.

WP2/15, focusing on Ukraine, uncovers the relationship between the factors impacting innovation activities of firms and the output of such activities. Firms located in Kyiv are more product-innovators and those located in Lviv are more process-innovators. This leads to overall innovation propensity of firms in Lviv being higher than that of Kyiv. However, one should be careful in stating that firms in Lviv are more innovative than those located in Kyiv due to a lesser technology- and capital-intensity of process innovations per se. Bordering regions still perform quite poor with regard to absorptive capacity parameters, namely R&D investment and involvement of R&D-related staff, in comparison to the capital region. Overall, foreign-owned firms are excelling domestic counterparts in terms of innovation progress. Greenfield FDIs are the most innovative firms, whereas domestic new private firms perform the worst. This is also supported by the evidence that domestic firms have much lower absorptive capacity in comparison to the subsidiaries of MNEs that bring along new

knowledge and technologies. In any case, high quality institutional environment is important for the innovation propensity of firms. Thus, when institutional framework is supportive towards firms, it impacts positively their innovation performance, but when institutional environment gets thick, it becomes a burden for business agents, which cannot introduce innovations as they get locked in.

WP2/16 indicates that regional dynamics in the external EU periphery are characterized by spatial selectivity and an, overall, unfavorable environment for lagging-behind regions. Over the last decade, regional inequalities have increased significantly in most ENP countries to levels that are unusually high by European standards. Some countries have experienced a core-periphery pattern of development with metropolitan regions dominating the national economy and lagging-behind regions being in a great difficulty to catch-up. The empirical model reveals that disparities at the national level exhibit a pro-cyclical behavior, increasing in periods of expansion and decreasing in periods of slow growth or recession. Moreover, the model suggests that long-term processes embodied in the level of development tend to favor a more equal allocation of activities and resources over space. However, this balancing effect will take place after a level of development that most ENP countries will not attain in the immediate future. The model employed indicates that, with the exception of public policy, all other drivers of regional growth (i.e. growth level, per capita GDP level, integration with EU in terms of trade and FDI) tend to favor the more advanced and the metropolitan regions. The peripheral, structurally weak and lagging regions are expected to experience an inferior growth performance and a pressure in their productive base arising from integration and competition from the more advanced European partners.

WP2/17, studying Israel, verifies that FDI increases regional capital stocks unequally, thereby exacerbating regional differences in labor productivity. Since regional wages vary directly with labor productivity a mechanism is established between FDI and regional wages. However, if regional labor supplies are elastic, the increase in wages induces employment, which mitigates the increase in wages, thereby offsetting the polarizing effect of FDI, partially and even totally. Since the elasticity of regional labor supply varies directly with internal migration, the polarizing effects of FDI on regional wage inequality may be mitigated by public policy which encourages internal migration. Overall, the findings of the analysis show that the polarizing effect of FDI on regional inequality may be large. The regional sensitivities to FDI shocks in Israel reflect distinct core-periphery differences. Of course, in a small country such as Israel, this effect is likely to be smaller than in larger countries (like many ENP countries) where the physical distances between center and periphery are greater. In larger countries such as Morocco, Egypt or Ukraine, there may be entire regions not reached by FDI, which naturally would exacerbate the polarizing effect of FDI. Therefore, in other ENPs, which are much larger than Israel, the polarizing effect of FDI is likely to be even greater.

The policy implications of each Working Paper are further explored into the Policy Notes texts. The Policy Brief text incorporates the policy implications derived from the research findings of each Working Paper, highlighting the added value of Deliverable 2.2. in reference to policy.