BRUEGEL POLICY CONTRIBUTION

ISSUE 2012/08
MAY 2012

HOW WIDE IS THE MEDITERRANEAN?

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Highlights

- This Policy Contribution provides up-to-date evidence of the strong heterogeneity in the relationships between the five biggest EU economies with the Southern Mediterranean Countries (SMCs).
- Algeria, Morocco and Tunisia are still strongly tied to France, Italy and Spain, in terms of investments, financial flows and migration. This pattern is in line with the pattern of sizable French and Spanish official bilateral development assistance for Algeria, Morocco, and Tunisia. However, the economic connection of Germany, the UK and the US to the western SMCs is negligible. German and US bilateral development assistance is focused in Egypt, while the four other SMCs appear not to be priorities for non-Mediterranean EU countries.
- These differences cannot be explained by geographical distance alone. The unbalanced economic relationship of the SMCs with a small number of European countries risks exposing the SMCs to shocks in partner countries. Stronger economic ties also results in a higher degree of mutual political attention, as exemplified by bilateral development assistance that flows more strongly between countries with strong economic links. EU external policy is still largely driven by member states' interests. Hence building economic ties between the SMCs and non-traditional EU partners could both improve the SMCs' external economic relationships, and make the SMCs' political relationship with the EU more resilient.

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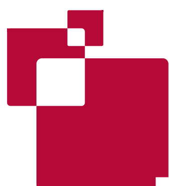

HOW WIDE IS THE MEDITERRANEAN?

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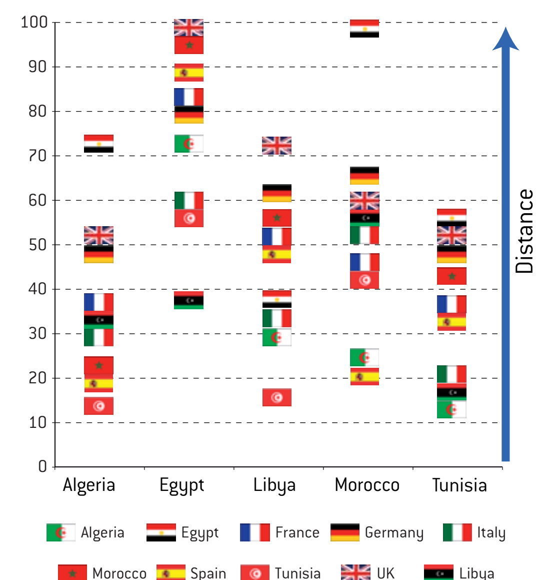
EUROPE AND THE SOUTHERN MEDITERRANEAN COUNTRIES (SMCs: Egypt, Libya, Algeria, Tunisia, and Morocco) share a long history of economic and political relations. Up until the early middle ages, the Mediterranean served to ease the exchange of information, people, and goods between Europe and distant countries. This resulted in strong political and economic ties between Europe and the SMCs (Braudel *et al*, 1977). However, in modern times the Mediterranean seems to have turned into a natural barrier between the divergent economic and political developments on the northern and southern shores. And initiatives for strengthening the linkages (such as the Union for the Mediterranean) have delivered little. One bold proposal for overcoming the Mediterranean barrier has been the development of a Euro-Mediterranean Economic Area by 2030 as called by the Bruegel Policy Contribution *Eastern-European Lessons for the Southern Mediterranean*. The proposal outlined how domestic reforms in the southern Mediterranean could be encouraged by (1) providing much needed short term assistance, (2) a mid-term quid-pro-quo framework that links successful reforms in the SMCs to a stepwise opening of the European labour and product market and that (3) anchoring the reforms to a shared long-term goal (a joint economic area by 2030). Moving towards such a vision requires a better understanding of the economic linkages between Europe and the SMCs.

Due to its size (500 million inhabitants) and economic power (GDP €12 trillion), Europe is a natural gravitational centre for the countries of the southern shore. Several studies analyse the economic relationship of the EU or individual countries to the SMCs. However, neither Europe nor the SMCs are homogenous blocs. Based on geographical proximity, common history and language some European Mediterranean countries are significantly more bonded to the SMCs than others. In this Policy Contribution, we quantify the degree of integration between key European countries and the five SMCs (in terms of trade, investment flows, financial flows, migration, and aid). The aim is to identify key-patterns of interaction. For this purpose we conduct a comparative analysis by putting the economic relationship between the SMCs and European countries in the context of their economic size and their geographical distance. This allows us to identify which countries have disproportionally strong economic ties.

1 MEASURING THE MEDITERRANEAN

We examine the relationship between geographic proximity and economic proximity. Although geographical distance is easy to measure, economic distance is less straightforward. We

Figure 1: Relative geographical distances between the population centres of the selected countries (normalised to 0-100)



Source: CEPII GeoDist Database (the distance between the population centres of Egypt and the UK (3600 km) is set to 100). Note: for better readability, the US has been excluded.

employ an approach based on economic 'gravity models' to discern the relative economic distance between nations (see Box 1). Specifically, we measure and study the economic distances between the SMCs and the five biggest EU economies.

The relative geographical distance in Figure 1 may be used as a reference for comparison of the geographical distances with economic distances calculated in the following sections. Obviously, the UK and Germany are further away from any SMC than France, Italy or Spain, though the distance between northern Europe and the SMCs is less than the distance between some of the SMCs themselves. One would expect that the three southern EU Mediterranean countries would interact economically more with the SMCs.

1.1 Trade

The gravity model literature generally agrees that the trade flows into and out of the MENA (Middle East and North Africa) region are unexpectedly low. Al-Atrash and Yousef (2000), for example, found that the countries of this region are scarcely

BOX 1: METHODOLOGY

In trade economics, gravity models have been used to predict bilateral trade flows (F_{ij}) based on the 'masses' of the trading economies (M_i and M_j) and the geographical distance (D_{ij}) between them:

$$F_{ij} = \frac{M_i M_j}{D_{ij}}$$

In these models, GDP is traditionally used as the measure of economic mass. We invert the idea of the gravity model to calculate a relative measure of the pairwise distance between countries. Rearranging the gravity model formula and solving proximity (the inverse of the distance), we obtain:

$$F_{ij} = \frac{M_i M_j}{D_{ij}} => D_{ij} = \frac{M_i M_j}{F_{ij}} => P_{ij} = \frac{F_{ij}}{M_i M_j}$$

Our aim is to calculate the 'proximity' for different categories of exchanges between countries. We will calculate it for aid, migration, exports, imports, total trade, FDI, and foreign claims. As these are very different categories, it does not appear sensible to take GDP as the measure of 'mass'. Hence, we use the exchange with all countries in the corresponding category to measure the economic 'mass'. The formula then becomes, for two countries i and j, the following:

$$P_{ij} = \left(\frac{\text{Flow or Stock}_{\text{ij}}}{\text{Mass(total flow or stock)}_{\text{j}} \text{Mass(total flow or stock)}_{\text{i}}} \right)$$

For example, the measure of export distance between Algeria and France would be measured in the following way:

$$P_{ij} = \left(\frac{Exports_{Alg \rightarrow Fr}}{Total\ Imports_{Fr} Total\ Exports_{Alg}} \right)$$

To represent the data, the distances for each indicator are normalised to 0-100:

$$\text{D}_{\text{ij}} = 100 \left(1 - \frac{\text{P}_{\text{ij}}}{\max\limits_{kl} \text{P}_{kl}} \right)$$

The following data was used for the analysis: migration data (2010 migrant stocks estimates) were gathered from Ratha and Shaw (2007) updated with additional data for 71 destination countries as described in the World Bank *Migration and Remittances Factbook 2011*; trade data was gathered from the UN Comtrade database; aid and FDI data was gathered from the OECD Stat database; claims data was obtained from the BIS *Quarterly Review*, September 2011. Where available, data for the five SMCs (Egypt, Libya, Algeria, Tunisia, and Morocco), the five biggest EU countries (France, Germany, Italy, Spain, UK) and the USA was used.

integrated with the rest of the world, and only integrated with each other. In addition, Iqbal and Nabli (2007) showed that SMC non-oil trade flows are just one third of what could be reasonably expected based on the MENA region's per-capita incomes, natural endowments and populations. In this section, we analyse the SMCs' bilateral trade flows by relating them to the total trade of their partners (see Box 1). Hence, a country that trades little with an SMC appears quite distant from this SMC, while a country that conducts a higher share of its trade with an SMC appears closer. To make the figures comparable among SMCs, we control for the total trade of the individual SMC. The results of this simple exercise are striking.

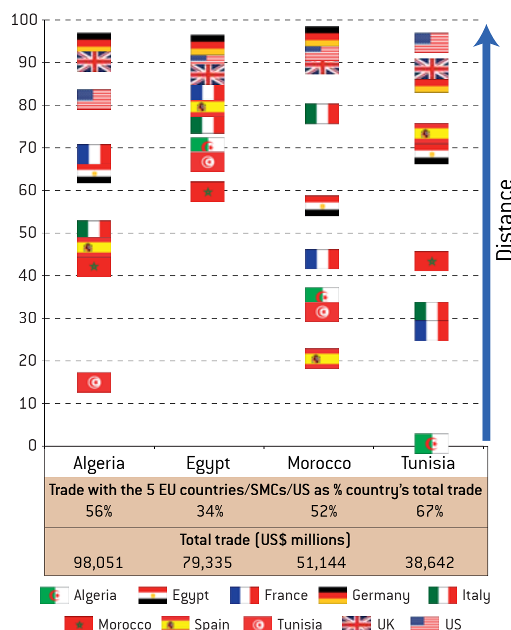
Measuring relative distance through bilateral trade works surprisingly well for all countries. The ordering of 'distances' calculated from trade data is largely consistent with geographic distances. Algeria is closest to Tunisia (and vice versa), and Morocco is closest to Spain, Tunisia and Algeria. The UK, USA, and Germany are much more distant from the SMCs than the three EU Mediterranean countries (France, Italy and Spain). This indicates that the trade patterns of the SMCs are not substantially biased towards trade with their SMC neighbours compared to trade with EU countries. Hence, intra-SMC trade barriers seem to be of similar size to trade barriers with European partners. The Mediterranean does not seem to be an extra barrier to trade.

When looking at the figures in detail, some particular cases emerge: (1) of all five SMCs, Egypt is the most distant from the partners analysed. It trades substantially less than the other countries with Morocco and Tunisia, its close neighbours. There are two explanations: first Egypt trades more with countries not studied in Figure 1 (eg India and the eastern Mediterranean countries), and second, Egypt is, in general, a rather isolated economy. (2) Trade between France and Tunisia is greater than the geographic distance would suggest. This can be explained by the non-geographic proximity of the countries, ie history, language and migration.

1.2 Foreign Direct Investment

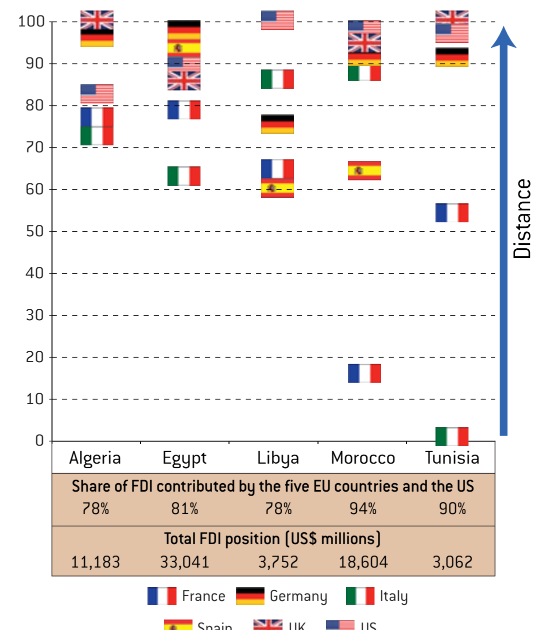
Foreign Direct Investment (FDI) has developed differently in different SMCs over the past decade. While Morocco has increased its share of EU FDI, from about 6 percent of GDP in 2000 to about 16 percent of GDP in 2009, the share of European FDI going to Libya, Tunisia and Algeria has remained low and constant relative to GDP (6 percent, 6 percent and 2 percent). To the sources of FDI we

Figure 2: Distance according to total trade 2010



Source: Bruegel based on UN Comtrade database (UN Statistics Division, 2011).

Figure 3: Distance according to FDI position 2009



Source: Bruegel based on OECD.Stat FDI position data (OECD, 2011).

1. Spanish FDI data for Tunisia was missing.

employ the same methodology as used with trade to calculate a measure of distance between the SMCs and their partner countries (see Box 1).

Our main finding is that geographical distance is less good a predictor for FDI than it is for trade. Still, the closest countries (Italy, France and, to a lesser degree, Spain) are more active in the SMCs than the distant countries (UK, US and Germany). Some interesting cases emerge: (1) France is one of the top two sources of FDI for all five SMCs. This predominant role is probably not merely the result of the French political interest in the region, but also partly a reason for it. (2) Italy has invested relatively more than France in Tunisia, Algeria and Egypt. This exposure will also have an influence on Italian political interest in the SMCs. In Libya, Italy is less involved than one would expect from historic and geographic ties. (3) Spain has some exposure in Libya and Morocco[1]. (4) The UK, US and Germany are not exposed to the region. Germany is even less active in Algeria and Egypt than the much more geographically remote US.

1.3 Financial flows

Banks in the SMCs are open to international financial flows to very different degrees. Egypt and Morocco are similar in that their banking sectors are more open, even if the reasons for their openness differ. The liberalisation and privatisation actions undertaken by Egypt were aimed at improving the GDP contribution of the financial sector (IMF, 2010); in Morocco, these policies have been implemented as part of a framework for the opening of the whole economy. Tunisia's three largest state-owned banks still account for about half of the market. Hence in terms of banking-sector openness Tunisia lies somewhere between Morocco/Egypt and Algeria/Libya. The banking sectors in Libya and Algeria are still tightly closed to foreign participation.

Despite differences in the openness of their financial sectors, almost all foreign money flowing into the financial sectors of all five SMCs comes from Europe. The percentage of foreign claims held by European banks is lowest in Algeria (74 percent) and highest in Libya (99 percent). US banks hold a significant proportion of foreign claims only in Algeria; in the other countries, the percentage retained by US banks is 6.8 percent at most (Egypt).

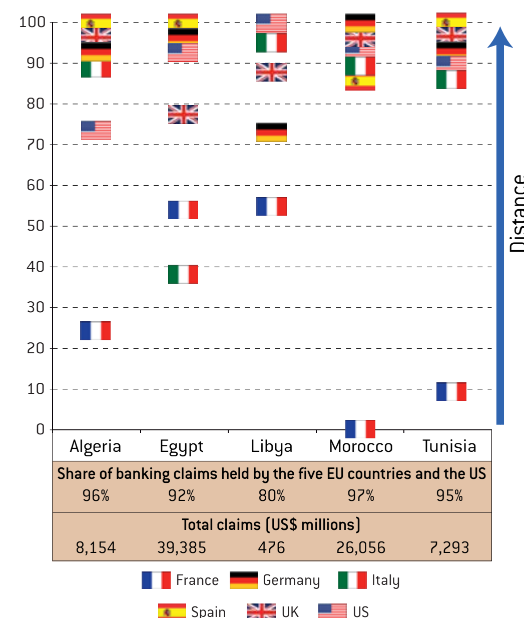
French banks by far hold the most claims in the SMCs. In Algeria, Morocco and Tunisia, French banks are the major holders of external claims. Alongside the strong French exposure, only the role of Italian banks in Egypt is worth mentioning. All other countries (UK, US, Germany and Spain) are underrepresented relative to the size of their foreign financial sector claims.

1.4 GDP Synchronisation

Highly integrated economies have positively correlated business cycles (Backus *et al*, 1992). However, the correlation of the level of economic activity in two countries can also be because the GDPs of both countries respond to the same factors (eg oil price or global demand). However, the absence of business-cycle correlation can demonstrate that two countries are not closely integrated economically. Correlation of business cycles is a practical, but by no means perfect, indicator for general economic integration.

Applying the Hodrick-Prescott filter to quarterly GDP data, we extract the business cycles for the

Figure 4: Distance according to foreign claims on the SMCs (March 2011)



Source: Bruegel based on BIS Quarterly Review, September 2011[2].

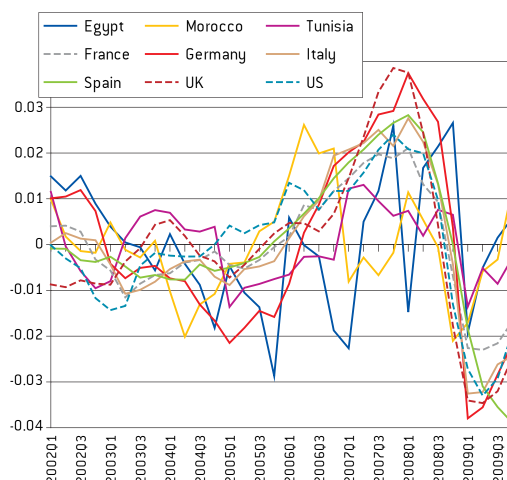
2. The graphs represent the breakdown of consolidated foreign claims on individual countries on an ultimate risk basis by nationality of reporting banks. The total corresponds to the total of the 24 source countries' financial claims reported by the BIS.

SMCs for which quarterly GDP data were available (Egypt, Morocco, and Tunisia) – see Figure 4. We then analyse the correlation of the cyclical components of the individual countries' GDPs.

The first finding is that business cycles in the developed countries are highly correlated. In contrast, the business cycles of Egypt, Morocco and Tunisia are not correlated. This supports the view that the SMCs are economically not integrated.

The second finding is that the business cycle of Tunisia happened to be highly correlated with that of all developed countries between 2002 and 2009. Whether this is due to the 'small country effect', which left Tunisia more exposed to the global business cycle than Morocco or Egypt, or whether it was due to deeper integration with developed economies, cannot be deduced from the correlation figures alone. The great importance of highly weather-sensitive agriculture in the GDP of Morocco and Egypt might be responsible for the low correlation of the two countries' GDP with those of the developed countries.

Figure 5: GDP cycle component of the Hodrick-Prescott (HP) filter



Source: IMF, International Financial Statistics for Egypt, Morocco and Tunisia; Eurostat for France, Germany, Italy, Spain, United Kingdom and United States.

The third interesting result is that the business cycle of Morocco is weakly (at the 10 percent significance level) correlated with the French and Italian business cycles, while it is not correlated with the business cycle of any other sampled EU country. This again highlights the important role France and Italy play in the region.

Finally, we note that the Egyptian business cycle we extracted from the GDP figures is unusually volatile. This might again be due to the high weather-sensitivity of the Egyptian economy. Surprisingly, the Egyptian business cycle is correlated to the German one at the 5 percent significance level.

1.5 Migration

The European Union is the preferred destination for migrants from all SMCs. However, the numbers and preferences differ significantly between countries.

Calculating distances, using migration data, confirms that France is clearly the most attractive

Table 1: Pairwise correlation of business cycles

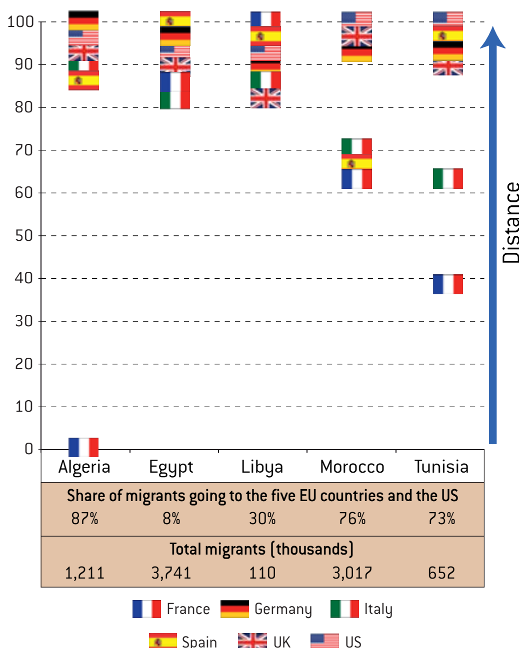
	Egypt	Morocco	Tunisia	France	Germany	Italy	Spain	UK	USA
Egypt	1								
Morocco	-0.029	1							
Tunisia	0.275	-0.143	1						
France	0.177	0.337*	0.530***	1					
Germany	0.418**	0.27	0.618***	0.907***	1				
Italy	0.198	0.300*	0.536***	0.982***	0.935***	1			
Spain	0.148	0.223	0.486***	0.942***	0.873***	0.954***	1		
UK	0.102	0.212	0.562***	0.896***	0.806***	0.902***	0.899***	1	
USA	0.071	0.353**	0.437**	0.901***	0.904***	0.927***	0.923***	0.758***	1

Source: Bruegel. Note: Business cycles fluctuations have been obtained applying the Hodrick-Prescott filter to seasonally adjusted real quarterly GDP data. Data for Egypt, Morocco and Tunisia have been seasonally adjusted thanks to the E-views' X11 procedure. The number of "*"next to a coefficient indicates the level of significance of the pairwise correlation (* for 10 percent, ** for 5 percent, and *** for 1 percent).

destination for emigrants from Algeria, Morocco and Tunisia. Obviously, history plays a more important role for migration than geographic distance. Present migration is potentially amplified by long-lasting path-dependencies of migration patterns. This is particularly striking in the case of Algeria, which has slightly closer trade and investment links with France than one would expect from their geographic distance, but which has a migration pattern that is extremely focused on France (Algeria was formerly part of France). Egyptian migration is very different from those of the western SMCs. More than three quarters of Egyptian migrants go to the Gulf countries (42 percent to Saudi Arabia, Kuwait, the United Arab Emirates and Qatar), Jordan (23 percent) and Libya (11 percent). Finally, there is only limited emigration from Libya to all countries.

Although less important, geography also plays a role. Italy is a major destination for Moroccans and Tunisians, while Spain is a major destination for Moroccans. Emigration of people from the SMCs to the US, the UK and Germany is negligible relative to the number of immigrants in these countries.

Figure 6: Distance according to migration stocks, 2010



Source: Bruegel based on Ratha and Shaw (2007) updated with additional data for 71 destination countries as described in the *World Bank Migration and Remittances Factbook 2011*.

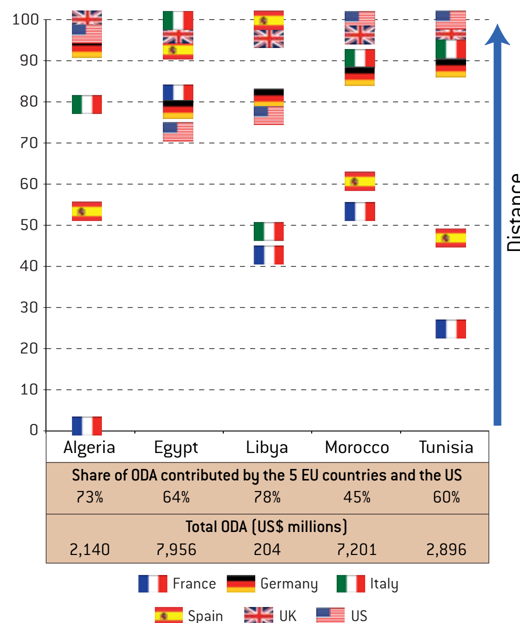
1.6 Aid flows

Between 2003 and 2010, the five European countries disbursed about $9 billion in official development aid (ODA) to the SMCs. This corresponds to 4 percent of their total official development aid. The US spent $3 billion or 2 percent. The distribution of aid by source country somewhat mirrors the trade, investment, financial and migration exposures. France is the main donor (relative to its total aid) in all SMCs except Egypt. It spends 9 percent of its overall aid in the region. Spain is active in the western SMCs (Algeria, Morocco and Tunisia), while, in terms of financial, investment, migration and trade flows, it is mainly exposed only to Morocco.

In contrast to the EU Mediterranean countries, the US, the UK and Germany play no role in the western SMCs. The US and Germany provide significant ODA, relative to their overall foreign aid portfolios, only to Egypt and Libya. According to these figures, the UK is virtually absent in the region.

In terms of ODA, in addition to the five EU countries covered by this Policy Contribution, the European institutions are a sixth major partner. EU institutions are among the top-two donors in Algeria, Egypt, Morocco and Tunisia. The EU spent

Figure 7: Distance according to sum of ODA received 2003-10 from all OECD countries



Source: Bruegel based on OECD.Stat aid data (OECD, 2011).

$5 billion between 2003 and 2010, or 6 percent of its aid budget.

2 CONCLUSION AND DISCUSSION

This Policy Contribution shows using up-to-date data that France, Italy, and Spain have a particular economic interest in the south-west Mediterranean. Furthermore, in terms of investment, trade, and financial and migration flows, they are 'closer' to Algeria, Morocco and Tunisia than geographic proximity alone would suggest. The flipside of this special relationship is that other countries – such as Germany and the UK – are relatively more 'distant' from the SMCs in economic terms. Hence, it is not the EU as a whole that has a special relationship with the south-west Mediterranean, but three countries that are particularly active in the region.

The existence of this special economic relationship has political implications. As we have shown, France and Spain are disproportionally active in the region in terms of bilateral development assistance, a proxy for political attention paid to a region.

Beyond bilateral political links, the SMCs' relationships with the EU as a whole are shaped by the special relationship between the western Mediterranean countries. European foreign policy is still largely defined by its member states and their interests. The war in Libya – in which France was a driving force while Germany abstained – clearly illustrated that the foreign policy interest of different EU member states do not necessarily overlap. In the past the EU's relationship towards the SMCs was largely driven by European-Mediterranean countries. Early cooperation forums such as the 'five-plus-five dialogue'[3] or the Mediterranean Forum[4] did not involve northern European countries. In 2008, the Mediterranean Union proposed by French President Sarkozy, which was supposed to create a joint governance structure for all Mediterranean countries, was supported by Italy, Spain and Greece. Due to pressure from the EU and some member states (namely Germany) it was, however, transferred into Union for the Mediterranean that includes the entire European Union. The advantage of this special relationship for the SMCs is that they have three important advocates in the EU that, in total, represent one third of the population and 37 percent of EU GDP. This has certainly influenced the focus that EU institutions put on the region. EU institutions spend 50 percent more on the region per capita than on other developing countries.

On the other hand, this special relationship poses a risk. The concentration of FDI, external trade and external finance on a limited number of partners is a risky strategy because it makes these flows partially conditional on the economic wellbeing of a limited number of partner countries. Additionally, in times when the economic weight of the EU Mediterranean countries in the EU is challenged by the European crisis and continuing eastward enlargement, the strong focus of the south-west Mediterranean countries on the northern shore of the Mediterranean might also have political consequences. Hence, diversifying investment in the SMCs, and financial and trade flows, to cover non-traditional European partners could be a good strategy for strengthening the relationships between the SMCs and the EU, and making the ties more resilient. While in relative terms this would involve a reduction in the importance of individual EU partners, in absolute terms the link between all partners might be strengthened.

All three sides – the EU Mediterranean countries, the EU non-Mediterranean countries and the SMCs – could gain from such a rebalancing of the economic relationship. But, to make this happen, all three sides would have to move. The EU Mediterranean countries would have to support their northern EU partners in becoming active in the region, for example by surrendering some of their privileged access. The non-Mediterranean EU countries would have to increase their economic exposure in the SMCs, for example through investment and trade promotion and by enabling some circular migration. And, finally, the SMCs should encourage economic activity on the part of non-traditional partners by lowering barriers for all partners, for example by making regulatory and decision-making processes more transparent.

A strategic balancing of the economic relationship could make the economic and political relationships between the EU and individual SMCs more predictable and resilient, which will be to the benefit of all partners.

3. The 'five-plus-five dialogue' was a cooperation process in the western Mediterranean that involved Tunisia, Morocco, Algeria, Mauritania, Libya, France, Portugal, Spain, Italy and Malta.

4. The Mediterranean Forum was a framework for cooperation between Portugal, Spain, France, Italy, Greece, Morocco, Algeria, Tunisia, Egypt, Malta and Turkey.

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