FEMISE RESEARCH PROGRAMME

Consequences of European Union Enlargement

for the Mediterranean

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Consequences of EU enlargement for the MED

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The main aim of the project was the identification of the effects of the EU enlargement to East European countries for Mediterranean countries (MED) and EU-MED relations. The assessment has been concentrated on trade relations (competition among the two regions) and on FDI attractiveness. Both commercial and FDI flows have been analysed for the period 1989-1998.

The project focussed the question of whether the next EU enlargement will sets up forces which encourage or discourage the Euro-MED evolution towards further improvements and integration.

The outcome of the research are summarised into three papers.

1. EU-MED scenarios

The Sideri paper[1], 98 pages long, focussed the factors explaining the relative poor performance of output and exports of the MED region, compared to other developing countries.

Several scenarios have been presented in his analysis, assuming different degrees of European involvement and different type of integration. The MED scenario has been completed considering the CEECs so as to detect the potential areas of co-operation between them and the MED countries.

Two alternatives are presented for the European Union:

- growingly integrated EU ruled by common institutions and referring to a process by which the integration of markets is guided by fiscal and industrial policies aimed at creating a rather homogeneous continental system where internal disequilibria and differentials among member countries are much reduced;

- slower process of integration and a EU guided by its major economic power, namely Germany.

Each of these alternatives is bound to have distinct consequences and a different impact on the CEECs and on the MED countries. Although the first alternative at the moment appears more likely, the second is no less relevant, particularly when considering Europe's history, and not only that of the last few decades.

The implications of the two alternatives for the MED countries are certainly quite different. Several indicators confirm the continued strengthening of ties forged between most countries in the MED region and the EU, a process that may have affected their insertion into the world economy and increased their dependence on Europe.

Three alternatives are presented for the Mediterranea region:

- strong integration: a most optimistic, but less likely, outcome based on the more efficient redistribution of resources and higher productivity made possible by increasing returns allowed by a larger market and no trade barriers. This outcome depends on the wider opening of EU markets, on a substantial transfer of financial resources to the MED countries, and on the successful adjustment required by the Eastern enlargement;

- weak integration: a more likely outcome insufficient, however, to sustain the development expectations of most MED countries. As a result migratory pressures remain high;

- partial integration: an unstable outcome resulting from the intractable divisions among the MED countries - partly or largely due to the unresolved Arab-Israeli conflict – or also to the Arab

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[1] S. Sideri, Problems, Alternatives and Policy Response, The Hague, May 2000.

countries' decision to give priority to their own integration before attempting one with Israel. As a result foreign investment come only to some areas while migratory flows may develop both within the region or may continue to be directed outside. Only if a sub-group of MED countries decisively engage in integration they could be able of transforming a partial integration into a strong one.

The EU-MED FTA should be considered as a complicated process with potential risks as well as benefits. By bringing together under a single framework growth, stabilisation, democratisation and pacification the Barcelona Declaration indicates that in the Mediterranean region democracy is considered a condition for maintaining peace, while pacific relations among the region's states facilitate, to some degree, the regional economic integration. The process depends on the pressure put by European competition on local producers and on the growing demand for imports that should follow the removal or the reduction of the impediments to trade among the MED countries themselves.

2. Stability, FDI and regional integration

Aside from these eventual effects, the expectations of a large increase in FDI may not come through because each MED country faces strong competition in attracting foreign investors and the Euro-MED Agreements will not automatically improve the investment climate. Considering investors' motivations the following three types of FDI can be distinguished:

- <u>domestic market oriented FDI</u> to exploit the opportunities offered by the local market. Its flow depends on the recipient country's market size and potential;
- <u>resource –based FDI</u> to exploit the opportunities of local resources. Its flow depends on the availability of raw materials and complementary resources;
- <u>export-oriented FDI</u> to exploit cheaper production locations which allow efficiency enhancement and re-exporting to the home market or somewhere else.

What type, if any, of FDI will EU-MED FTA foster is not clear, as reported by Alessandrini-Resmini paper, since the materialisation of EU's investment in the MED region is going to depend on the economic and political developments in the latter, but also on the evolution of the process of integration taking place in Europe. What seems clear, however, is that regional integration and economic growth are essential conditions for the first type of FDI, whilst the EU-CEECs relationship is to determine the prevalence of type two or three of FDI.

At any rate, the losses of FTA (fiscal revenue losses, trade diversion arising from the loss of preferential trade arrangements, increased unemployment due to structural adjustments and increased competition) may be reduced by opening to foreign investment and benefit from their dynamic factors, like the increased productivity, the economies of scale made possible by enlarged market size, and the positive impact on investor perceptions of the region's closer links with Europe.

In other words, the benefits derived from increased bilateral trade could be greater when compounded by those due to the expected greater inflow of FDI and a better allocation of resources.

The realisation of these dynamic gains requires, however, the following conditions:

- outward-oriented trade strategy, so that more or less parallel to MEDA a global liberalisation is enacted;
- market orientation, that is liberalisation of factor and domestic goods markets
- promotion of private sector development, implying privatisation of state enterprises and deregulation of market entry;
- deep integration;

- extension of reforms to other sectors, including the creation of a climate of fiscal stability and social safety nets.

MED producers must now compete head-to-head with companies located in the CEECs. The competition is even fiercer because both areas present relative labour costs that may not differ much, since their respective per capita incomes are also quite close to each other. And although factor endowments differ in important respects, some of the CEECs are producing and exporting to the EU products similar to those made by MED countries. Whether the MED countries will be able to catch up with the CEECs this clearly will depend on many other variables, including the complementary actions and policies pursued to improve the functioning of their economies.

3. Competition between MED and CEECs

The reaction of the EU to the changes in Eastern Europe, providing both financial funds and the perspective of rapid accession to the EU, has rapidly re-established and even strengthened the links between the two halves of the old continent. Notwithstanding EU-MED FTA proposal, the contrast between the treatment offered to both regions is remarkable.

The risk of direct competition between CEECs' and MED countries' products on EU markets is more likely in the manufacturing sectors, particularly food products and clothing, sectors in which the two regions present the same levels of productivity in the mid-1990. The two regions are bound to compete in basic and light manufactures as the quality of the CEECs' output improves thanks to the adoption of new technologies and the substantial investment being made there by Western MNCs. Yet productivity gains in the CEECs have been accompanied by stronger wage increases than has happened in the MED countries. The risk is even greater when considering the effect of the EU enlargement on the MED countries' agricultural exports to the CEECs. Although these exports have doubled in the last six years, it does not seem likely that the CEECs are going to import as much as to compensate the losses suffered by the MED region because of the CEECs competition on EU markets.

It seems that CEECs' relatively low wages – at rather similar levels with those prevailing in the MED countries - and significant human capital stock, plus geographical proximity and adequate service links, make them formidable competitors for the MED region. But the two regions have different structural characteristics: the common wisdom is that they are not direct competitors, at least from an economic perspective. The different factor endowments, showing a prevalence of unskilled labour and raw materials for the Mediterranean area and skilled labour and a quite developed industrial structure for the CEECs, seems to imply divergent productive specialisation and therefore, divergent trade patterns. At the same time, there is a large consensus upon the fact that, for some time, the two regions have been (and are) competitors vis-à-vis the EU from a political perspective, proximity to the EU market and also low labour costs, allowing for a profitable delocalisation of labour-intensive phases of EU production.

To render concrete the great potential of agriculture and manufacturing that many MED countries have, they need more than negotiating radical reduction in border measures and even eliminating distorting domestic subsidies. They also need to harmonise the norms and standards, improve their marketing systems, increase productivity, diversify their client base. Only then can they succeed to expand their exports to the EU and beyond. The risk is that given the structural differences, MED countries may continue to compete for trade preferences, more than it might be the case for the CEECs.

4. Decresing importance of OP trade.

The second study deals with a particular form of trade integration, the so-called Outward Processing Trade (OPT), that can be considered a subcontracting arrangement. *Fabbris and Malanchini*[2] analyse the European activities in OPT with the neighbouring countries involved in the currently undergoing enlargement and integration process, notably the CEECs and the Mediterranean countries.

The study explores whether the two regions compete in quality of preferred locations in the process of international fragmentation of production. A preliminary analysis of OPT data reveals that CEECs' volume of trade is much higher than that generated by the Mediterranean countries during the entire period, although the gap started to widen in 1994 due to both CEECs' boosting and Mediterranean region's falling of performance[3]. Both areas experienced a decline in the rate of growth of OPT in the period of 1993-98. However, in the case of CEECs, the <u>decrease</u> should be attributed to the diffusion of other forms of internalisation of production following the integration process in the EU, as confirmed by the decreasing importance of OP traffic both in value and with respect to normal trade. European firms are progressively switching to different forms of delocalisation of production, like FDI, rather than changing their specialisation pattern.

On the contrary, in the case of the Mediterranean countries, after a first period of relative satisfying rate of growth, their performance shows a downward trend just starting from 1995, despite the improved political climate generated by the Barcellona Agreement. This could suggest that instead of benefiting of the changing European economic and political scenario and of the growing demand of delocalisation of production by European firms, the Mediterranean countries have lagged behind with respect to CEECs.

The intensity of economic relations between EU countries and their Eastern and Southern partners has been carried on at a more desegregated level in order to understand the patterns of commodity composition. Outward shipments from CEECs to Europe are mostly concentrated in semi-finished goods, as shown by the importance of chapters 61-62. Chapter 62 (articles of apparel and clothing accessories - not knitted or crocheted) is by far the most affected by vertical specialisation as proxied by OPT, accounting, on average, for more than 50% of total OPT directed to the EU. While in CEECs its importance was slowly declining through time, in the Mediterranean countries the phase of decline is followed, starting from 1994, by a growing trend.

In particular we underline the following pattern.

Chapter 61 (articles of apparel and clothing accessories - knitted or crocheted) became the core of CEECs' OPT traffic with Europe since 1991, although the gap with the volume of chapter 62 is apparent. The emerging role that the CEECs seemed to be playing in the footwear industry at the beginning of the nineties is not confirmed by the downward trend recorded by chapter 64 (footwear, gaiters and the like), having slipped from second to fourth position.

The rising importance of products of the electromechanical industry (chapter 85: electrical machinery and equipment and parts, telecommunications equipment, sound recorders, television recorders) leaping from the eighth to the third position, illustrates the process of diversification of OP traffic undergoing in this area.

Chapter 94 (furniture; bedding, cushions; lamps and lighting fittings nesoi; illuminated signs, nameplates and the like, prefabricated buildings) followed an opposite pattern, recording a declining trend starting from 1993.

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[2] T. Fabbris, F. Malanchini, *Patterns of vertical specialisation and European Outward Processing Trade (OPT): a comparative analysis between Mediterranean countries and CEECs. Is there real competition*?, Milano, June 2000

[3] This result is partially influenced by the Malta's peculiar trend, that recorded a considerable increase of OPT at the beginning of the '90s followed by a strong reduction in 1996-97.

During the Nineties, the Mediterranean countries are characterised by a static ranking of sectors; nevertheless they show a higher degree of diversification with respect to CEECs. Mediterranean countries realise the major share of OPT traffic with Europe in the traditional textile and clothing (TC) industry, with semi-finished goods of chapter 62 and 61 comprising between 1/2 and 2/3 of their total shipments during the last ten years. However, although with large swings[4], the electromechanical sector (chapter 85) is more significant in outward processing than in the CEECs, providing a higher share of total re-imports for Europe. The footwear industry (chapter 64), and the mechanical sector (chapter 84: nuclear reactors, boilers, machinery and mechanical appliances, computers) play a limited but increasingly relevant role in OP traffic.

Several preliminary conclusions could then be drawn: on the one hand, the commodity composition of outward processing trade for the two regions seems to <u>show different patterns of specialisation</u>, although outward processing, in its own nature, is concentrated in the same industries. A further analysis has thus been focused on the five sectors (61, 62, 64, 84 and 85) which, for both regions, represent the bulk of outward shipments towards Europe. On the other hand, the productive structure of the CEECs seems to be more solid than that of the Mediterranean countries with their higher diversification resulting in a lower vulnerability to unfavourable single sector market swings.

5. Competition between Mediterranean countries and CEECs

The degree of competition between the two regions has been examined according to the market and product specialisation. Two countries should be considered as direct competitors only when the trade pattern records high values for both dimensions. Therefore, a set of indicators of competition has been developed at two-digit level (considering all the 99 Chapters of the HS Classification of products) and for five sectors that record the bulk of OPT activities identified in the former paragraph (61, 62, 64, 84 and 85).

At the <u>aggregate level</u>, two different indicators have been used. The first indicator evaluates the **market similarity** of the direction of OPT flows and measures the extent to which the Mediterranean and CEE countries' re-exports of all kind of goods are concentrated in the same European markets.

The Market similarity (MS) index has been calculated as follows:

$$MS_{XY}^t = \sum_{j=1}^{14} \quad \min \left[\frac{\sum_{i=1}^{99} X_{ij}^t}{\sum_{j=1}^{14} \sum_{i=1}^{99} X_{ji}^t} \quad ; \quad \frac{\sum_{i=1}^{99} Y_{ij}^t}{\sum_{j=1}^{14} \sum_{i=1}^{99} Y_{ji}^t} \right] \tag{1}$$

where:

X^t = CEECs re-exports at period t

Y^t = Mediterranean countries re-exports at period t

i = two-digit HS classification of products (99 categories)

j = European countries markets

MS Index can take on values between zero (full geographical differentiation) and one hundred (identical export structure).

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[4] The large decline of the value and quota of chapter 85 in 1996 and 1997 is mainly due to the fall in semiconductors revenues to be supplied within the OPT regime by Malta.

The second index evaluates **sectorial similarity** (SS) between the two regions and measures the extent of competition existing considering their whole range of products (i.e. the 99 chapters of the two-digit HS classification of products). It has been calculated as follows:

$$SS_{XY}^t = \sum_{i=1}^{99} \ \min \ \left[\frac{\sum_{j=1}^{14} X_{ji}^t}{\sum_{j=1}^{14} \sum_{i=1}^{99} X_{ji}^t} \ ; \ \frac{\sum_{j=1}^{14} Y_{ji}^t}{\sum_{j=1}^{14} \sum_{i=1}^{99} Y_{ji}^t} \right] \qquad (2)$$

where:

X^t = CEECs re-exports at period t

Y^t = Mediterranean countries' re-exports at period t

i = two-digit HS classification of products (99 categories)

j = European countries markets

As before, the SS index ranges between zero (perfect differentiation) and one hundred (perfect similarity).

Comparing the above two indexes we notice that the degree of sectorial competition (SS) is always higher than that measured in geographical terms (MS), even though the gap is shrinking during the nineties. MS shows a strong upward trend through time (exception made for the decline recorded in 1997) indicating a greater similarity of the export markets, and in particular the growing importance of German market for OP total shipments of the Mediterranean countries and of Italian and French markets for CEE countries.

The study proceeded into a more <u>detailed analysis</u>, at four digit level, of five sub-sectors regrouping the bulk of OPT activities for the two regions (Sector 61, 62, 64, 84 and 85). Two additional indicators have been used: the **sectorial market similarity index** (SMS), which evaluates the degree of geographical competition existing in each of the five sectors that together assure quite the entire OP traffic for both regions; the **index of product similarity** (PS), which evaluates the degree of product competition existing in each of the five sectors that together assure quite the entire OP traffic for both regions.

The study shows that the degree of geographical competition at sectorial level (SMS index measuring the extent to which 4-digit OP traffic of the two areas converge to similar EU markets) is lower than the rivalry calculated on the basis of the desegregation by products (the PS index). In general we observe that the patterns of SMS and PS are usually more regular than those tracked by the more aggregated SS index, the degree of "real" competition changing only gradually through time.

Single sectors however show different patterns.

- <u>Apparel and clothing</u>, is by far the most important sector since it acts as the major catalyst of competition, explaining more than 60% of total competition existing between the two regions. In particular, it shows a progressive convergence of the two regions towards similar EU markets, so much, that the gap between the two indicators measuring the similarity of markets and products (respectively SMS and PS) has become negligible during the last two years. This is the consequence of the re-orientation of German OP traffic in the textile sector towards Mediterranean countries (as proxied by an increasing share of German OPT re-export from Morocco and Tunisia), the inverse movement recorded by France, the higher exposure of the Netherlands particularly in Morocco, Tunisia and Turkey, and the growing importance of Italy in this sector in both regions.

- Knitted clothing and apparel, although to a different extent, is the second major domain of competition: France is redirecting a substantial share of OPT activities toward the CEECs (Romania and Poland), whereas the reverse seems to occur for Germany, increasingly exposed toward Tunisia and Morocco.

- Footwear shows an increasing similarity in products however not matched by a convergence of markets. Indeed, with the exception of France, the remaining EU countries considered delocalise footwear processing activities mainly in the CEECs (in particular in Hungary and Romania for Italy, in Poland and Hungary for Germany).

- As far as the electromechanical sector is concerned, the large increase in the degree of competition that emerged looking at the SS indicator is only apparent; although in principle it explains growing shares of competition existing between the two regions.

Finally, price competitiveness has been evaluated at sectorial level using an indicator that is the result of a double weighting method applied to bilateral trade flows.

As far as the **TC** and **footwear sectors** are concerned, the Mediterranean area improved its position in the EU market as a whole with respect to the CEE region reaching higher quality market segments, due to both its better performance and to the decline of CEECs. The improvement in quality is attributable respectively to Morocco, Tunisia and Turkey catching-up process with the CEECs. In particular, the Eastern competitors providing the highest quality are Hungary, the Czech Republic and Poland.

In the case of the **mechanical** and **electromechanical** sectors, the high variability of prices in both regions is due to the substantial differences between unit values of the various subcategories performed by the different third countries. The upward trend experienced by the Mediterranean countries during the period 1989-1994 is quite uniquely due to Malta's OP activities. Tunisia appears to have found its own higher-than-average quality market segment, with respect to both the Mediterranean partners (with the exception of Israel) and the CEECs. Israel's leading position mostly explains the Mediterranean good performance. However, Tunisia and particularly Morocco are progressively consolidating their positions facing the competition of Poland and Hungary.

As far as the EU countries geographical strategies are concerned, France benefits of the high quality granted in both the TC and footwear sectors by Morocco, and in the mechanical sector by Tunisia; however the higher price range offered by Hungary in the latter one might partly justify the re-direction of trade flows towards the CEECs observed above. Due to the similarity of price ranges offered by both regions, Germany re-orientation of flows does not seem to be explained by a search of higher quality, but rather by the need of satisfying increasing volumes of delocalisation flows. Italy's strategy appears similar to the German one, since the re-orientation toward the CEEC does not seem motivated by any precise choice of quality, but rather of efficiency.

The degree of competition is mostly attributable to similarity in products, rather than of European markets of destination, although the two regions seem increasingly orienting their re-exports to similar EU countries. In terms of trade volumes generated, the performance of the Mediterranean region appears less satisfying than that of the CEECs.

The CEECs are characterised by a higher reactivity to the increase of the vertical specialisation process coming from Europe, due to both the higher rate of growth they experience with respect to the Mediterranean countries and also to the fact that historically, they "moved first" adopting the vertical specialisation pattern even before the end of the COMECON. Furthermore, they not only show a higher degree of homogeneity as a group, as confirmed by a more equal distribution of OPT between countries, but share a common view of the outward processing as a kind of integration strategy with Europe.

On the contrary, the Mediterranean area appears more diversified, showing highly differentiated performance by country. In particular, Tunisia and Morocco seem to follow a quite divergent pattern with respect to the other regional partners, being not only able to face competition coming

from CEECs without loosing significant EU market shares, but also to recover, particularly Morocco in the last two years, from the stagnant economic situation shared by the entire area during the nineties.

In conclusion, the deepening of the integration process with the CEECs does not seem to have damaged the Mediterranean interests as far as OPT is concerned, at least in the case of the best performers Tunisia and Morocco, since the re-orientation of Italy and France toward the CEECs has, as a counterpart, the recent re-direction of Germany towards the Mediterranean region. Despite the different trade volume generated, the Mediterranean countries, increasingly show the ability not only to compete in the traditional sectors, like the TC industry, but also to enter successfully more technologically advanced sectors, like the mechanical and electromechanical ones. In addition, by up-grading their services, the Mediterranean countries seem to have carved their own market segment, realising a product differentiation strategy with respect to the CEECs.

6. The factors of FDI attractiveness in the Mediterranean region

The third study deals with FDI and the causes of the insufficient attractiveness of the Mediterranean countries. *Alessandrini and Resmini*[5] review the relevant literature on the motivations of the transnational enterprises and focus their attention on two different strategies of internationalisation, defined respectively as "horizontal" and "vertical". The horizontal strategy characterises foreign investments which aim to secure an advantage when the host country opens up its domestic market. FDI can be considered as an extension of the export strategy, and they can be defined as "market seeking" since its target is local markets. FDI supports intra-sector trade flows and generates differentiated products on the regional markets. The vertical strategy characterises foreign investments which aim at lowering the production costs and implies a new production system which specialises in one particular phase of the production process. This strategy can be identified with "efficiency seeking" FDI. The choice of the host country is then explained by the factor endowment. FDI supports inter-sector trade flows supported by the price differential of factors of production.

The econometric analysis explores and compares the main determinants of foreign direct investments into the CEE and the MED regions applying an eclectic theroretical model[6]. The framework is a standard location choice model, using European Union and American outward stocks of FDI for the years 1990-1997 in a panel data study. The choice of the variables has been dictated by the literature on the determinants of FDI in the developing countries. The independent variables have been chosen to reflect the attractiveness of the host economies as potential locations for foreign investors. Central European countries are defined as the Visegrad ones, Bulgaria, Estonia, Romania and Slovenia, while the 11 Mediterranean countries are Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Syria, Tunisia and Turkey. The econometric study includes exogenous fixed effects for each host countries, since both regions hide large differences within them.

Five common hypothesis have been tested in the model:

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[5] S. Alessandrini, L. Resmini, *FDI in the Mediterranean region: a comparison with CEE experience*, Milano, January 2000.

[6] A small number of econometric studies on the determinants of FDI have recently been undertaken in Central and Eastern Europe (Lansbury et al. 1996; Holland and Pain, 1998; Resmini 1999 and Altomonte, 2000). As far as the MED region is concerned, Petri (1997) estimated a regression model to determine how the level of FDI and stock market capitalization compare with international norms. He found that there is great potential for expanding FDI into the region and that large gaps actually exist between the Med countries and similar economies elsewhere. Michelet (1999) reporting the results of a survey, concluded that the MED countries are actually excluded by the "core countries", i.e. by that group of countries whose characteristics are able to attract foreign investments regardless the country of origin and the economic activities. Whilst such empirical evidence is informative, it does not provide a full explanation of recent patterns of investments in the MED region.

1. **Market size hypothesis**. Given their long-run nature, FDI in any period are assumed to be a function of the size of the target market: the larger the market, the more opportunities it offers to foreign investors. As explanatory variable, the growth rate of the GDP (G_{jt}) has been used (Wang and Swain, 1995; Holland and Pain, 1998; Singh and Jun, 1996).

2. **The openness of the host market**. This implies that foreign investors prefer countries with relatively liberal trade regimes, possibly within region with free trade agreements (Blomstrom and Kokko, 1997). Existing business linkages and knowledge of local markets may help foreign firms, especially small and medium-sized ones, to take advantages of the opportunities presented by a rapidly evolving market structure. As explanatory variable the share of trade (exports plus imports) in each of the host economies with the partner investing economies ($TRADE_{ijt}$) has been used. In addition, GTP_{jt} measures the growth rate of the GDP of the trading partners of each host economy, weighted by trade shares, in order to test whether investment decisions are influenced by trade arrangements.

3. **Manufacturing cost advantages hypothesis**. Profit-maximising multinationals may decide to de-localise production plants overseas to exploit manufacturing cost advantages, in terms of both labour costs (including quality of the skills of the labour force) or proximity to natural resources. Locations with low labour costs and/or highly skilled labour force are expected to be more attractive for foreign investors, particularly for firms producing labour intensive goods. The proximity to natural resource hypothesis is tested through the country specific fixed effects.

4. **Economic and political stability hypothesis**. The long-term nature of FDI makes them very sensitive to risk with respect to portfolio investments. It may take several years before a foreign investment becomes profitable, so investors want to be assured of the economic and political stability of the host countries, globally considered [7].

5. **Strenght of local manufacturing activities hypothesis.** Manufacturers gain from locating in closer proximity because of external economies; moreover, a country with a strong concentration of manufacturing activities is more likely to have an adequate labour pool and supply network to support industrial activity (Markusen and Venables, 1999). Manufacturing development has been measured by the share of manufacturing in total GDP.

7 The factors of attractiveness in the Mediterranean region and in the CEECs: the econometric analysis

To summarise, the estimated model assumes the following form[8]:

$$(\frac{FDI_{ijt}}{POP_{jt}}) = \alpha_{0ij} + \alpha_1 G_{jt} + \alpha_2 EDU_{jt} + \alpha_3 ORI_{jt} + \alpha_4 TRADE_{ijt} + \alpha_5 MAN_{jt} + \alpha_6 GTP_{jt} + u_{ijt}$$

where:

FDI_{ijt} denotes outward stock of FDI from country *i* to country *j* at time *t*,

POP_{jt} is the population level of the host country,

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[7] We proxy the business environment characteristics with an index, the Operation Risk Index (ORI), computed by a consultancy agency (Bery S.A). A panel of 105 experts from around the world evaluates each country on the basis of a wide range of factors, including political continuity, attitude toward foreign investors, enforceability of contracts, infrastructure and local management. This qualitative index ranges from 0 (prohibitive risk) to 100 (operation conditions very closed to those existing in the industrialised countries). A number of studies have already used this index as a proxy of country risk in a inter-country perspective, with good results.

[8] All variables are in log form. In estimation we allow for country specific effects within host countries, α_{0j}, since both regions hide large differences within them. We also control for home country specific effects (α_{0i}). Not wishing to suppress useful information about some form of interdependence among countries, a seemingly unrelated regression model has been chosen.

G$_{jt}$ denotes the GDP growth rate of the host country j,

ORI$_{jt}$ measures the country risk,

EDU$_{jt}$ is the level of tertiary education (percentages),

TRADE$_{ijt}$ captures the intensity of trade linkages between home and host countries,

MAN$_{jt}$ is the share of the industry in the GDP and

GTP$_{jt}$ is the growth rate of the trade partners of the host economies.

$$i = EU, USA$$

j = Algeria, Bulgaria, Cyprus, Czech R., Egypt, Estonia, Hungary, Israel, Malta, Morocco,

    Poland, Romania, Slovenia, Slovak R., Syria, Turkey, Tunisia

$$t = 1990, ..., 1997$$

Table 1 shows the results of the econometric analysis by pooling all observations in a <u>single sample</u>. This analysis of the determinants of FDI shows important sources of heterogeneity which differentiate the two regions: region specific effects, picked up by the REG dummy representing the integration initiatives with the European Union, and home country specific effects, caught by the HOME dummy. Both are statistically significant at the one per cent level.

By splitting the original sample into <u>two sub-regional models</u> (CEECs and MED ones) the determinants should be differentiated in order to define the specific effects of the two host regions. The resulting coefficients for the CEECs and the MED ones are reported in tables 2 and 3, respectively.

Concerning <u>CEECs</u>, three models have been tested with statistically significant results. The only exception is the growth rate of the host economies, suggesting that the market size effects are adequately captured by conditioning on the population level. Among the dependent variables, the growth rate of the trading partners has a negative coefficient close to zero, confirming the strategy to target FDI to the development of the domestic markets. Also the attraction of labour cost advantages has been confirmed by the positive coefficient of EDU, indicating that foreign investors prefer locations with highly skilled labour force as is the case of CEE, a region generally considered as low cost area with respect to Western Europe and the United States as well. This result also confirms that the productivity gap between home and host countries is not very pronounced. Trade integration plays a positive sole, since the positive coefficient of TRADE confirms the complementarity of trade and FDI. Intensive bilateral trade relations are important to stimulate further FDI inflows. The negative sign shown by MAN is not surprisingly since in transition countries privatisation and restructuring processes have played an important role as determinants of FDI. Politicl and economic stability also plays a positive role in attracting FDI as confirmed by ORI coefficient, suggesting that foreign investors in Central and Eastern Europe are very concerned about risk.

The same formulation of the model has been applied to the <u>Mediterranean region</u>, explaining about two third of the variation in the dependent variable (table 3). Natural resource endowment still represents an important factor of attraction of FDI. Aside from these motivations, foreign investors are attracted by market considerations (market size effects and its growth rate), concerning not only the single national markets, but also the regional ones. The coefficient of GTP is small but significant at the one per cent level of confidence. These effects are <u>stronger</u> than in Central and Eastern Europe, suggesting that a deeper regional integration may sound attractive to foreign enterprises. Labour cost advantages (EDU) and bilateral trade relations (TRADE) are statistically significant with the expected positive signs. So, the availability of high skilled labour is another important factor of attraction for foreign investors provided that wage differentials between home and host countries prevail on productivity differentials. The impact of the development of the

manufacturing sector is less clear. According to the analysis, strategic motivations may boost foreign investors to prefer less developed sectors. This unespected conclusion may imply that the degree of development of the manufacturing sector in the MED region is not adequate to attract foreign firms, but a further increase in the number of foreign firms could accelerate the formation of agglomeration economies.

A different pattern is shown by the economic and political stability indicators of the Mediterranean countries. In this case the sign of the coefficients does not always agree with the underlying economic theory: higher stability reduces the per-capita amount of FDI. This surprising result may be explained partly by the fact that most FDI in the Mediterranean region have always been resource specific and natural resource seeker. Foreign investors localise wherever resources are available, regardless of the presence of other factors of attraction. Also the size of the manufacturing sector seems to affect negatively the stock of FDI, as previously obtained in Central and Eastern Europe panel. According to recent studies the bulk of new FDI projects undertaken in the Mediterranean region represents relatively large-scale, capital intensive undertakings in energy sector, industry and infrastructure and in particular petrochemical plants, cement factories, power plants and telecommunication infrasctuctures. All these sectors are characterised by a strong presence of large firms and by a strong competition due to the need to exploit economies of scale to become competitive.

The existence of different sensitivities and motivations of European investors has been confirmed by splitting the CEE and MED sample into two sub-regional ones (EU and USA): the determinants of investment should be differentiated in order to define the specific effects of the two home regions. The results are reported in table 4. The null hypothesis of equal slope coefficients can not be rejected in the CEE panel. In the Mediterranean region, however, FDI from Western Europe react to the explanatory variables differently from American outward FDI stocks. These differences concern basically two variables, i.e. country risk and the regional market potential. While European investors seem to be risk neutral, since the coefficient is closed to zero, though always negative, American FDI stock are much more averse to the country risk. This behaviour implies that, for the European investors, economic stability may compensate the political instability of the MED region, while American investors prefer political to economic stability. The implications of this strategic behaviour are certainly quite different. This implies that an improvement in trade relationships with the EU – as envisaged by the Euro-Med Agreements – would have a positive impact on FDI patterns. As far as the market potential of the region, Western European investors seem less sensitive than the American ones. In addition trade with major investors countries, represented by the TRADE coefficient, appears somewhat less relevant than found in Central Europe and benefitting mainly the American investors.

The econometric analysis confirms that foreign investments in the Mediterranean region may be motivated by other strategic objectives (first mover advantages, natural resource control, etc.). At any rate, a conducive business environment is important for foreign investors, as the experience of Central and Eastern Europe demonstrates. FDI are the consequence of the opening up of the domestic market of the host country. Products supplied in host markets, the technology incorporated into the plants and the marketing strategies are generally similar to those used in the home country. This presupposes the similarity of the environmental conditions, as envisaged by the Association Agreements and the structural reforms of the Mediterranean countries. But in this region the economic stability must be accompanied by political stability in order to affect positively FDI inward stocks not related to natural resource exploitations. This result implies that the MED countries should concentrate their efforts on getting a higher level of "governability attractiveness" in order to attract a higher number of foreign investments.

Table 1 Econometric results: all countries

variables	model 1	model 2
C	-21.71 (14.29)	
G	0.11 (5.01)	0.09 (0.73)
GTP	0.09(1.15)	0.06 (0.97)
EDU	0.28 (1.23)	2.40 (17.43)
ORI	7.27 (20.70)	2.09 (4.85)
TRADE	1.44 (15.03)	1.30 (25.25)
MAN	-0.48 (1.73)	-4.68 (13.44)
HOME	-2.49 (10.00)	-2.07 (14.49)
REG	2.61 (15.91)	
host country effects		$F(13,153)=20.10$
R^2	0.52	0.78
adj. R^2	0.49	0.75
SE	1.41	1
n. of observations	174	174

$HOME = \begin{matrix} 1 & EU \\ 0 & USA \end{matrix}$; $REG = \begin{matrix} 1 & CEE \\ 0 & MED \end{matrix}$; t-statistic in parenthesis.

Table 2: Econometric results: Central and Eastern European Countries

Variables	model 1	model 2	model 3
G	0.004 (1.32)		0.006 (2.48)
GTP	-0.37 (4.67)	-0.37 (4.64)	-0.4 (6.27)
EDU	2.56 (7.47)	2.90 (12.74)	2.80 (8.82)
ORI	4.34 (3.72)	4.35 (3.90)	7.80 (9.52)
TRADE	1.36 (3.85)	1.47 (4.83)	1.21 (4.71)
MAN	-2.41 (3.68)	-2.54 (4.31)	
HOME	-2.37 (2.38)	-2.67 (3.14)	-1.98 (2.74)
host country effects	$F(7, 71)=15.38$	$F(7, 71)=19.79$	$F(7,83)=14.10$
R^2	0.89	0.88	0.87
adj. R^2	0.87	0.87	0.84
SE	0.77	0.78	0.84
n. of observations	86	86	90

t-statistics in parenthesis.

Table 3 Econometric results: Mediterranean countries

Variables	model 1	model 2	model 3
G	-0.11 (1.10)		
GTP	0.93 (3.60)	0.82 (3.70)	0.84 (3.07)
EDU	2.67 (3.56)	1.77 (3.78)	2.42 (7.20)
ORI	-3.91 (3.10)	-4.61 (5.84)	-3.79 (6.37)
TRADE	0.94(4.70)	0.79 (5.25)	0.49 (4.35)
MAN	-6.18 (3.26)	-3.00 (2.72)	
HOME	-1.17 (3.09)	-0.94 (2.95)	-1.07 (4.63)
host country effects	$F(4,68)=18.18$	$F(5,76)=13.14$	$F(7,111)=6.88$
R^2	0.7	0.69	0.69
adj. R^2	0.65	0.64	0.65
SE	0.99	1.02	1.08
n. of observations	80	88	114

t-statistics in parenthesis.

Table 4 Additional econometric results: home country effects

Variables	CEE	Med region
G	0.006 (2.15)	-0.04 (0.80)
GTP	-0.31 (3.16)	1.73 (5.91)
EDU	2.78 (6.65)	2.61 (3.88)
ORI	6.60 (6.38)	-5.93 (7.15)
TRADE	1.21 (4.21)	0.54 (1.33)
MAN		-4.99 (3.66)
HOME	-7.94 (1.72)	-16.96 (5.49)
G*HOME	-0.001 (0.18)	-0.13 (0.77)
GTP*HOME	0.07 (0.45)	-1.4 (4.70)
EDU*HOME	-0.19 (0.39)	-0.36 (0.43)
ORI*HOME	1.72 (1.67)	5.70 (6.30)
TRADE*HOME	-0.31 (0.76)	-2.03 (1.32)
host country effects	$F(7,71)=9.10$	$F(4,62)=19.63$
R^2	0.87	0.79
adj. R^2	0.83	0.73
SE	0.88	0.88
n. of observations	90	80

$HOME = \begin{cases} 1 & EU \\ 0 & USA \end{cases}$. Consequently, USA coefficients are those of the explanatory variables, while EU coefficients are those of the explanatory variables plus the differential slope coefficients, i.e. those of the multiplicative dummies, provided that they are statistically significant. (Gujarati, 1995). t-statistics in parenthesis.