OUTWARD-PROCESSING TRADE BETWEEN FRANCE AND CENTRAL AND EASTERN EUROPEAN COUNTRIES
Is there a substitution to France–Maghreb outward-processing trade?

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France outward-processing trade (OPT) with the Central and Eastern European countries (CEECs) and Maghreb developed with a high momentum from 1993 to 1997, higher in the former than in the latter area. A crowding out effect of France OPT with Maghreb by France OPT with the CEECs is evident. A substitution relationship between French foreign direct investment (FDI) and OPT is statistically tested, and detrimental to OPT in the case of the CEECs. In Maghreb, French FDI is crowded out by the development of France OPT. The substitution of French FDI to OPT in the CEECs is explained by a number of factors like the abolition of tax privileges for OPT in the EU-CEEC relations, a market-seeking FDI, a non significant impact of labour costs on both FDI and OPT, a determinant role of institutional reforms and lower country-risk in attracting FDI instead of OPT.

The break-up of the former communist regime, the first years of transition towards a market economy in Eastern Europe and the self-dissolution of the former Council of Mutual Economic Assistance (CMEA) has triggered a move towards the integration of the CEECs into the world economy through the privileged channels of economic relationships with, and aid from, the European Union (M. Andreff and W. Andreff, 1995). Such an integration process is based on a significant reorientation of CEEC foreign trade, from the former CMEA partners to the West, and on an increasing inflow of foreign direct investment from Western (European) home

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countries into the new transitional economies. French trade and FDI have obviously been affected by this overall reorientation, and the usual trade partners and host countries of French investment in the Third World have immediately felt a potential threat of being crowded out by the CEECs. These feelings have been particularly strong on the North-African shore of the Mediterranean Sea, and traditional partners of French firms, exporters and importers in Maghreb countries have been very concerned. Some have called for a new trilateralism between Maghreb, the European Community and the CEECs (Ben Salem, 1991), while some studies have focused on the overall trade between the three areas (Labaronne, 1996). Another approach contends that the EU is extending its economic periphery from its Mediterranean South to its European East, but this extension has not resulted in the newcomers crowding out the more traditional peripheral countries, as far as overall trade is concerned (Chevallier et al., 1998). One purpose of this paper, dealt with in Section 2, is to exhibit whether a crowding out or, at least, a substitution effect can be witnessed, detrimental to Maghreb countries and in favour of the CEECs, not in overall trade, but in this specific part of foreign trade with France which is OPT.

There are several modes of entry for a Western (French) firm in any host country, and in particular in post-communist transitional economies. One is trade, another one is FDI. In between, one finds the so-called "new forms of investment" (Oman, 1984) in the OECD parlance (i.e. joint ventures, minority-controlled affiliates, co-production, international subcontracting, technical assistance, licensing, franchising, management agreements and turnkey plants). The higher the transaction costs on a foreign market, the more "internalized" the mode of entry, like a wholly or majority-owned affiliate; the lower the transaction costs, the more externalized the mode of entry like trade, as in turnkey plants (Mucchielli, 1985). International subcontracting fits with transaction costs, which are neither too high nor too low, when industrial enterprises shift part or all of their manufacturing processes to a foreign country, as part of an either horizontally or vertically linked production system. It requires segmentation and a relocation abroad of part or all of the firm's production processes, and unavoidably triggers international trade flows (a cross border trade of inputs and semi-finished products); thus, it actually appears to be an intermediary form between trade and FDI. Subcontracting is a frequent means of production relocation (Lemesle, 1995), technology transfer, improvement of managerial skills, and product design adaptation to the world market, much like FDI. At the same time it saves on capital expenditures, equity involvement and corporate governance costs – like trade. Finally, it is a component of lean production and global outsourcing developed by transnational corporations in the framework of their new global strategies (W. Andreff, 1996). In order to implement these strategies, transnational firms pay special attention to

building an efficient network of suppliers at a lower degree of vertical integration, which means many autonomous enterprises strongly interrelated through subcontracting and outward processing trade (Halpern, 1994). From the European Union's point of view, "a subcontracting relationship exists whenever a business (subcontractor) acts for the account of another (main contractor) undertaking in the process of working and making a specific product to plans and technical specifications supplied by the main contractor, who has final economic responsibility" (quoted from UNECE, 1995).

We focus, in this paper, on international subcontracting looked at through available macroeconomic and sectoral trade data registered under the customs classification of OPT, which more precisely refers to fashioning subcontracting.[1] The latter means that exports of semi-finished products flow from the main contractor's country (here France) and, after some fashioning, imports of more elaborated intermediary products – or even final products – flow back from the subcontractor's to the main contractor's country. OPT is thus considered sometimes a sub-category of countertrade; a transaction where exports and imports are linked (Neale and Sercu, 1993). We compare these linked bilateral flows between France and the CEECs on the one hand, and three Maghreb countries – Algeria, Morocco and Tunisia – on the other hand. CEECs are understood *lato sensu* as to encompass 27 countries. Even though some of them are not geographically located in Central Europe, all of them have once been members of either CMEA or the Federal Republic of Yugoslavia:

1. CEFTA countries: the Czech Republic, Hungary, Poland, Slovakia and Slovenia,[2]
2. the Balkan countries: Albania, Bosnia–Herzegovina, Bulgaria, Croatia, Macedonia, Romania and Yugoslavia (Serbia–Montenegro),
3. the Baltic states: Estonia, Latvia, Lithuania, members of the Baltic Free Trade Area,
4. CIS countries: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan, members of the Commonwealth of Independent States.

The last subdivision among the CEECs (based on observations below), is the four major host countries who make up OPT operations with French main contrac-

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[1] Data have been collected from Eurostat and the Chelem data bank by Marie-José Desaigues (ROSES).

[2] In the period covered by our study (1993–1997), Romania was not yet a CEFTA member.

tors: the Czech Republic, Hungary, Poland and Romania.[3] They are referred to as major partner countries (M4 in the Tables). Our first task is to compare the development of France OPT with Maghreb countries and various CEEC subgroups in terms of growth, relative share in overall trade, major products (sectors) concerned, and comparative specialization (Section 1 below). France OPT has been largely a one-way operation so far (i.e. companies in the CEECs and Maghreb have been processing intermediate inputs, semi-finished or final products for French enterprises and not the reverse). This is quite logical if one refers to the determinants of international subcontracting and OPT.

The determinants of fashioning subcontracting abroad with OPT are various. It is very clear that the bilateral flow of OPT export and reimportation would have no (or less) interest for an EU main contractor if it should be taxed twice at the border. Therefore, the first determinant of OPT is that some countries, free trade areas or customs unions, apply a specific customs regime to OPT. In 1986, such a regime was introduced in the European Community (EC) which allowed temporary export of EC (then EU) products to be transformed, mended, fashioned or integrated into a more elaborated product on an assembly line and, afterwards, be reimported with an overall or partial exemption from customs duties and, if any, a partial avoidance of quantitative quotas. The objective of the OPT customs regime is to avoid taxation of EU commodities that are contained in imports produced by an EU member country. Only the value added abroad is submitted to taxation; this *fiscal* OPT regime is open to any manufactured product. Therefore, OPT is advantageous, compared to regular trade with customs duties, because commodities are either duty-free or marginally taxed. In this regard, OPT helps improve the trade gain of the main contractor (Cheval, 1996). In order to benefit from the specific OPT customs regime, the subcontractor and the main contractor must be legally independent entities, otherwise the international flows of semi-finished products will be considered as intra-company trade. This *definitely differentiates OPT from FDI.*

A second customs regulation relates to *economic* OPT. It refers exclusively to clothing and textiles, and essentially allows for preferential tariff quotas on reimports of goods processed abroad (UNECE, 1995). In order to qualify for the special provisions of economic OPT, the EU producer must satisfy a number of conditions which include, *inter alia*, the goods sent abroad for processing should

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[3] Russia is only the seventh partner in the French main contractors' exports (after Bulgaria and Ukraine) in 1997; on the other hand, Russia is the second partner in France outward processing reimportation, but the latter's share in overall imports from Russia is small and very much concentrated on one product (28 in the classification).

originate in the EU and the value of outward processing should not exceed 50% of the EU producer's output.

Other determinants of outward processing, which are widely considered in economic literature, are lower production costs (in particular lower unit labour costs) in the subcontractor's country and low transport costs between the two countries involved. These determinants help to avoid tariff barriers, particularly when the main contractor's country has erected some protection measures against sensitive imports from the subcontractor's low-wage country (Graziani, 1998). All of these factors may have been relevant in international relationships between France and both the CEECs and Maghreb. Transport costs are not very high due to the geographical proximity between France and both areas, and are on a decreasing trend with the technological improvement in international transport. Unit labour costs in hard currency are lower in Maghreb countries than in France by a wide margin. A similar gap in labour cost existed between France and the CEECs at the dawn of the transition process, due to low real wages in the East, even lower in hard currencies caused by the initial devaluations of former socialist monies. However, with the economic recovery in the second half of the nineties, the labour cost gap with France slightly narrowed after labour productivity and real wage increased in most CEECs (W. Andreff, 1999a). This may well be a determinant for French firms to switch from OPT to a more domestic demand-oriented FDI in the coming years. The labour cost comparative advantage which favoured OPT with the CEECs would be superseded by a market demand comparative advantage, fueled by higher incomes (wages) and purchasing power, attractive to foreign investors. This assumption remains to be tested (see Section 3).

It is often argued (UNECE, 1995) that OPT with the CEECs is a way, for an EU (French) stagnating sector, to cope with strong competition from foreign (namely Asian) suppliers. The argument is obviously relevant for the textile and clothing industry – which concentrates the great bulk of EU (France) OPT with the CEECs – as well as the footwear industry where Community producers have lost market shares both abroad and at home. This argument pertains less to machinery and electrical equipment industries. Nevertheless, OPT with the CEECs is a lever to improve the competitiveness of EU producers, on the basis of low labour costs. Once these costs start to grow, OPT enables EU producers, having a foot in the door, to swiftly switch to FDI. On the other hand, participating in subcontracting and OPT with an EU main contractor is likely to upgrade the industrial competitiveness of East European subcontractors and improve the quality of their products.

Some other prerequisites must be met to determine OPT (Boudier-Bensebaa and Brezinski, 2000). The host (subcontractor's) country must offer industrial partners with existing production capacities that can fit with the technical and eco-

nomic norms of the main contractor. This means that a CEEC is likely to attract
OPT if it exhibits a competitive advantage of its producers over those located in
other CEECs and developing countries. The host country must also have reached
an institutional and political stability (an acceptable level of country-risk[4]), and
achieved a satisfying business climate, with secure private property rights.
Finally, unlimited imports of intermediate products and unrestricted exports of
processed goods have to be guaranteed. As a result, CEECs have an uneven access
to OPT.

As intermediary forms of trade in goods and trade in factors of production
(Schmidt and Naujoks, 1994) – here intermediary means between direct trade and
FDI – international subcontracting and OPT are often regarded as a temporary or
transitional phenomenon (Lankes and Venables, 1996) which must be substituted
in the long run by either direct trade or FDI, depending on the worsening or im-
proving investment climate and risks in the host country (W. Andreff, 2000). In
the short run, OPT is more flexible than FDI insofar as it requires no capital invest-
ment. This makes it more easily adaptable to a risky economic environment such
as the CEECs in the early years of transition. The last question addressed, in our
paper, is whether an emerging substitution of FDI to OPT is yet at work in the rela-
tionships between France and the CEECs, and Maghreb as well (Section 3). Such
a substitution might result in an increasing share of FDI and a shrinking OPT be-
tween France and both areas. By the same token, OPT might cease to be "more im-
portant than either direct trade or FDI as a source of interdependence between EU
and the CEECs" as it was phrased in the case of clothing (Corado, 1994).

We do not analyze here whether the EU–CEEC interdependence through OPT
is promising or not, or whether its possible substitution by FDI will increase or de-
crease the adjustment cost of CEECs' laggard industries (in a nutshell, we neglect
all the microeconomic dimensions (Papanek, 1998; Pellegrin, 1996) which should
take place in a more comprehensive analysis of OPT and FDI relationships). Nor
do we focus on the historical dimension of East-West OPT in Europe. In the for-
mer planned economies, OPT was nearly the only possibility of creating direct
links with convertible currency markets outside the vertically organized and state
controlled foreign trade (Hamar, 1998) but, since custom-based foreign trade sta-
tistics was only introduced in the 1990s in the CEECs, data for the earlier years is
not comparable. Since the 1970s, in some CMEA countries (including Hungary),

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[4] An acceptable country-risk for OPT may sometimes be unbearable for FDI since OPT does not
result in either capital investment or ownership of a production facility abroad. The subcontractor
remains with his/her property rights and has to cope with his/her (host) country-risk, investment
climate, labour market situation (for instance, firing excess manpower which should have been
done by the foreign investor in case of FDI), and so on.

FDI was forbidden, although occasionally it allowed a few foreign affiliates. Thus, as a specific category of countertrade, some OPT has developed before 1990 between Eastern Europe and EC members, the first being Germany. For instance, according to an OECD survey (Zaleski and Wienert, 1980), subcontracting with OPT was only yet representing 7.4% of the overall number of identified East-West technological transfer and industrial co-operation operations (the other forms of transfer were licensing, turnkey projects, co-production and joint ventures). German OPT with CMEA countries existed as early as 1971 and in 1988 its share was 57% of all the German OPT with the world (Boudier-Bensebaa and Brezinski, 2000). France OPT with CMEA countries was markedly lagging behind at the time. In 1988, France had a lower share than the EC average (10.9%) for OPT reimportation in her overall import from the CEECs (CGP 1999).

1. COMPARATIVE GROWTH AND SPECIALIZATION OF FRENCH OUTWARD PROCESSING TRADE WITH THE CENTRAL AND EASTERN EUROPEAN COUNTRIES AND MAGHREB: AN EMPIRICAL ASSESSMENT

Algeria, Morocco and Tunisia had signed co-operation agreements with the European Community (EC) in 1976, which were enforced in 1978 (Bensidoun and Chevallier, 1994). They started to benefit from the OPT customs regime, namely in their trade with France, under specific quotas for OPT in textiles and clothing which were included for the first time in the Multi-Fiber Agreement III (1982–1986). In addition to MFA, they adopted voluntary export restrictions to the EC (EU) in which OPT reimportation was admitted in excess of normal quotas (Mouchart, 1999). More recently, Euro-Mediterranean association agreements were signed with the EU by Tunisia in 1995 and Morocco in 1996, and entered into force in 1998; these agreements foresaw the creation of a Euro-Mediterranean free trade area after a twelve-year transition period.

Former CMEA exports to EC member markets were restricted by quotas up to 1989 (W. Andreff, 1990; Erzan and Holmes, 1992), including various OPT quotas. The extension and abolition of quotas boosted OPT flows after 1991 due to the preferential treatment of CEEC imports accepted by the EU within the System of Generalized Preferences (SGP) framework and with association agreements. The regulation of OPT between the EU and the CEECs has evolved over the last ten years. The enforcement of European agreements between 1991 and 1995[5] led to a

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[5]   In 1991 for Hungary, Poland and Czechoslovakia (then in 1993 for the Czech Republic and Slovakia), in 1993 for Bulgaria and Romania, and in 1995 for Estonia, Latvia, Lithuania and Slovenia.

step by step phasing out of quotas and tariffs on CEEC products flowing into the EU single market. The Copenhagen Summit shortened the deadlines for duty and quota abolition. For instance, customs duties on steel imports from the CEECs were abolished by the end of 1995 and on textile-clothing imports by the end of 1996. The EU trade policy has thus favoured the ten associated CEECs, in particular in the textile-clothing industry, compared to countries committed to the Multi-Fiber Agreement (which will phase out in January 2005). The European Council, at its meeting in Copenhagen in 1993, decided to extend duty-free treatment of OPT to the associated countries which began January first, 1994 (UNECE, 1995). An EU regulation on the textile-clothing OPT regime, which entered into force in 1995, created the opportunity for increased participation by the CEECs in preferential OPT, under strict rules which were designed to protect employment in the EU. This trade policy has been friendlier to OPT than to FDI or direct trade, in providing OPT reimportation with a competitive edge relying on lower (tax-free) prices. However, the specific customs regulation came to an end in 1998 for OPT between the EU and CEFTA countries, and in Bulgaria in 1999, when direct trade was no longer restricted by any tariff and quota on manufactured goods. An overall liberalization of EU-associated CEEC non-agricultural trade is scheduled for 2002.

Thus, for French (European) firms, a window of opportunity opened for developing OPT with the associated CEECs, from 1991 to 1997. The comparative advantage of duty-free OPT has vanished, insofar as nearly all – even sensitive – products now are duty-free and quota-free in the EU-associated CEEC trade, except agricultural products. EU–CEEC OPT should thus decline now, leaving more potential room for FDI. This is one of the reasons why we have focused on the period 1993–1997, for our observation of France–CEEC OPT. The second reason is, there is no common statistical source for EU and CEECs before 1990 and resorting to national statistical yearbooks is extremely tricky for this period. Moreover, various studies have covered the emerging process and the early years of OPT development with the CEECs up to 1993 (Corado, 1994, 1995; Graziani, 1998; Schmidt and Naujoks, 1994; UNECE, 1995). In addition, 1993 opened a new stage in the EU integration with the implementation of the single market. All the data we use, with regard to OPT, is taken from Eurostat. Some other data comes from the Chelem data basis, and data on French FDI abroad has been obtained at the French central bank (Banque de France). Our observation period only runs up to 1997, though OPT data is available for 1998 and will be referred to when useful.

1.1. An evolving geographical orientation of France outward processing trade

The first observation is that France OPT with our 27 sampled CEECs, was only slightly bigger than the one with the three Maghreb countries in 1993: 214 million Ecus as against 189 million Ecus (i.e. 13% bigger) on the export side, and 300 million Ecus compared with 270 million Ecus (i.e. 11% bigger) on the import side. However, OPT appeared to be relatively more important in the France–CEEC export than in the France–Maghreb export when one calculates the ratio (percentage) of OPT exports to overall exports: this ratio was 4.7% against 3.6% for Maghreb in 1993. The relative importance was quite similar for the France OPT reimportation from both areas: respectively 6.4% and 6.9% of overall imports in 1993 *(Table 1)*. In 1997, OPT exports reached 352 million Ecus to the CEECs, which means a figure 59% higher than OPT exports to Maghreb (221 million Ecus). OPT reimportation from the CEECs, with 514 million Ecus, were even higher (102%) relative to OPT reimportation from Maghreb countries (254 million Ecus).

Table 1

France outward processing trade with CEE and Maghreb:
percentage of overall trade and evolution, 1993–1997

	Central and Eastern Europe		Maghreb	
	Export	Import	Export	Import
1993				
Outward processing trade*	214,339	299,506	189,154	270,419
OPT in % of overall trade	4.7	6.4	3.6	6.9
1997				
Outward processing trade*	352,195	513,618	221,153	253,527
OPT in % of overall trade	3.5	6.6	3.6	4.6
Annual growth in 1993–1997	13.2	14.4	4.0	(−1.6)

* In thousand Ecus
Source: Eurostat

Thus, from 1993 to 1997, *French business switched its major OPT reimportation basis from Maghreb to the CEECs*. Such a change was reflected in a 14.4% average annual growth of France–CEEC OPT imports during this period while France–Maghreb OPT imports decreased by 1.6% per year, on average. France–CEEC OPT exports grew more than three times the growth of the France–Maghreb OPT exports. French exports, for further processing, in the CEECs became increasingly significant, between 1993 and 1997, compared with similar flows to Maghreb. The observed trend suggests an increased competitiveness of

CEECs in OPT, compared to Maghreb countries, due to learning, restructuring and experience acquired by East European subcontractors during their co-operation with French main contractors. In 1998, OPT reimportation from the CEECs stagnated at 514 million Ecus, and OPT exports *fell* to 243 million Ecus (–31%), probably the first sign of the vanishing comparative advantage of OPT that had been foreseen for 1998–1999, due to tariff and quota phasing out. OPT exports to Maghreb practically stagnated, in 1998, with 230 million Ecus (+0.4%) while OPT reimportation from Maghreb increased up to 278 million Ecus (+9%).

France OPT with both areas did not grow faster than overall trade, between 1993 and 1997, except for OPT reimportation from the CEECs whose share in overall imports was slightly higher in 1997 than in 1993. The share remained unchanged in France OPT exports to Maghreb while in 1997, OPT exports to the CEECs and OPT reimportation from Maghreb fell. The two latter evolutions, in the case of France, are below the profile of the assumed "simultaneous dynamism of OPT and direct trade" between EU and the CEECs (Pellegrin, 1998). Last but not least, OPT with France *created trade surplus* for the CEECs (a surplus of 86 million Ecus in 1993, 162 million Ecus in 1997 and 171 million Ecus in 1998) and Maghreb (81 million Ecus in 1993, 33 million Ecus in 1997 and 48 million Ecus in 1998), an impact which must have been appreciated by countries suffering from overall trade deficit (all except Russia).

Now, let us briefly compare our results on France OPT with the CEECs to European Union OPT, with the same geographical area (relying, for the latter, on the data elaborated on in Andreff and Boudier-Bensebaa, 2000). In 1993, OPT exports to the CEECs amounted to 7.8% of overall exports of EU-12, and the percentage was 10.5% for reimportation. Thus, *French enterprises were much less involved in OPT with the CEECs than average European* (in particular German) *firms*. The same conclusion applies to 1997 when EU-12 OPT exports reached 6.1% of EU-12 overall exports and 8.9% on the reimportation side.[6] But both French and EU OPT shares in overall trade with the CEECs were on a *decreasing trend* in 1997 compared to 1993, so that the aforementioned exception of France OPT export to the CEECs is all the more significant.

A more detailed view is provided in Annexes 1 and 2. *Balkan countries had the highest share of OPT exports and reimportation in overall trade with France*, compared to CEFTA, CIS and the Baltic states. This was mainly due to the very high ratios observed for Romania (and to some extent Bulgaria). Romanian OPT reimportation to France was approximately one quarter of overall imports from

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[6]   The same results are obtained if one takes into consideration EU-15 instead of EU-12. In 1995, EU-15 OPT exports accounted for 7.2% of EU-15 overall exports (5.6% in 1997) and EU-15 OPT imports amounted to 9.3% of EU-15 overall imports (8.4% in 1997).

Romania (26% in 1993, 23% in 1997). Among CEFTA countries, Hungary had a ratio which compared to Romania for reimportation in 1993 (23%), but it dropped to 11% in 1997, explaining the drop of CEFTA OPT reimportation to France from 10% in 1993 to roughly 8% in 1997. Note that OPT reimportation in overall imports is insignificant from the Baltic states and is still low – though growing- from CIS countries. With regard to the OPT reimportation ratio to overall imports, Tunisia was ahead of Poland but lagged behind Romania and Hungary, while Morocco roughly compared to the Czech Republic. Algerian figures were even less significant than the ones of the Baltic states. With regard to OPT exports from France, Romania and Hungary came first in the ratio of overall exports, ahead of Tunisia, Morocco and Poland, while Balkans were ahead of CEFTA, CIS and the Baltic states. *All ratios decreased from 1993 to 1997*, except for Balkan OPT exports and reimportation, and Baltic and CIS reimportation. It seems that *CEFTA countries, front runners in OPT with France, were successfully challenged by the Balkan countries; first Romania, and to a lesser extent by the newcomers from the CIS.* The latter might well be the next area of France OPT expansion after 1999, when the window of opportunity would be closed in associated countries. Such a move of OPT, among the CEECs, from CEFTA to the Balkan countries had occurred between 1992 and 1995: "OPT has also been moving from the CEECs with higher wages (especially Hungary and Slovenia) to the Balkan countries" (Lemoine, 1998). What is revealed, with our more recent data for France OPT, is a possible second switch toward CIS which is also expected from other main contractor countries (UNECE, 1995). This challenge of CEFTA frontrunners by Balkan and CIS countries, as far as OPT is concerned, is partly due to the fact that the former have yet attracted more substantial flows of FDI than the latter (see Section 3).

The distribution of France OPT with Maghreb, various subgroups of the CEECs and major partner countries is provided in Annex 2. From 1993 to 1997, the market share of CEFTA decreased in both OPT exports and reimportation between the overall CEECs and France, whereas the Balkans' share sharply increased as well as the CIS share (the Baltic states' share also increased but remained very small). In 1997, CEFTA roughly accounted for one half (52%) of France OPT exports to the CEECs, the Balkans for one third (36%), the CIS for one tenth (11%) and the Baltic states for less than 1%. CEFTA was over two fifths (43%) of all France OPT reimportation from the CEECs, the Balkans nearly one third (31%), the CIS reached one quarter (26%) and the Baltic states were below 1%. In 1998, CEFTA gained ground in France OPT exports (64%) while the Balkans (29%) and the CIS (7%) lost ground. The distribution between the three areas remained virtually unchanged in France OPT reimportation in 1998, compared to 1997. In the EU-15 OPT exports to the CEECs, in 1997, CEFTA attracted a 61%

share, the Balkan countries 26%, the CIS 7% and the Baltic states 6%; in the EU-15 OPT reimportation, in 1997, the respective shares were: 58% for CEFTA, 29% for the Balkans, 9% for the CIS and 5% for the Baltic states (Andreff and Boudier-Bensebaa, 2000). Thus, *France OPT was less oriented toward CEFTA and the Baltic states* (privileged areas of German main contractors) and *more Balkans and CIS-oriented* than the EU-15 OPT.

Romania, Hungary and Poland had the leading market shares in both France OPT exports and reimportation, followed by the Czech Republic among the CEECs; while the Romanian and the Czech shares increased and the Polish share decreased (the Hungarian share increased in the CEEC OPT exports and decreased in OPT imports). The CEEC OPT with France *geographically concentrates on four major countries*: the Czech Republic, Hungary, Poland and Romania attracted together 66% of France OPT exports in 1993, and 71% in 1997, while their share in France OPT reimportation was 65% in 1993 and 57% in 1997. In this respect, French business concentrated its OPT in roughly the same proportion in the same CEECs as European business did. In 1997, the four above-mentioned CEECs were concentrating 68% of EU-15 OPT exports and 66% of EU-15 OPT reimportation with all the CEECs (Andreff and Boudier-Bensebaa, 2000), whereas the share of these four countries was only 49% of overall EU-15 exports, and 46% of overall EU-15 imports from all the CEECs. The Maghreb OPT with France was *roughly divided fifty-fifty between Morocco and Tunisia*, from 1993 to 1997. OPT flows between Algeria and France are insignificant.

1.2. Sectoral (product) concentration of France outward processing trade

Turning now to the sectoral (product) distribution of France OPT with the CEECs and Maghreb, we have calculated the Herfindahl–Hirschman concentration index by product *(Table 2)*. The index is given by:

$$HHI = 100 \sqrt{\sum_k MS_k^2}$$

where MS_k stands for the market share of the product k in the overall OPT market (export or import). OPT is rather concentrated, in particular for reimportation from both the CEECs and Maghreb. Between 1993 and 1997, the product concentration of France reimportation weakened, slightly from the CEECs, more markedly from Maghreb, while concentration grew for France OPT exports to both areas.

The picture of sectoral (product) concentration is also clear when assessed on the basis of two-digit product groups (Annex 3). The first ten product items ac-

Table 2

Product concentration index of France outward
processing trade with the CEECs and Maghreb, 1993–1997

Year	Central and Eastern Europe		Maghreb	
	Export	Import	Export	Import
1993	28.89	54.94	30.49	60.80
1997	33.25	51.75	34.55	47.73

Authors' calculation of the Herfindahl–Hirschman index from Eurostat

counted for 80–81% in France OPT exports to the CEECs, CEFTA and Maghreb, in 1993; the first ten reimported items concentrated a more important share of OPT reimportation, roughly 97–98%. OPT exports were even more concentrated on the first ten products (85% in all the three areas) in 1997 and the first ten OPT import products remained with a 97–98% share of the total. *The degree of concentration was higher in France OPT than in EU-15 OPT with the CEECs* in 1997, which was only 75% on the export side and 91% on the reimportation side for the first ten products (Andreff and Boudier-Bensebaa, 2000).

In terms of product structure, in 1993, textile products accounted for 47% of France OPT exports to the CEECs (59% to CEFTA) and 57% to Maghreb, and clothing respectively reached 25% in OPT exports with the CEECs (14% with CEFTA) and 13% with Maghreb. OPT reimportation of textile products was very low from both the CEECs and Maghreb while clothing accounted for the great bulk of reimportation from the CEECs (70%) and Maghreb (76% – the same figure as for CEFTA). France OPT actually *was achieving a vertical division of labour in the textile-clothing industry with the relocation of the more labour intensive downstream parts of the production process* (clothing) in lower labour cost areas such as the CEECs and Maghreb, in 1993. Wool, cotton and synthetic fibers were the major items exported by French main contractors to both areas. Hosiery, other clothes, apparels, togs, rags and footwear were the major items reimported from CEEC and Maghreb subcontractors. The picture basically did not change in 1997, but the share of textiles declined to 38% in France OPT exports to the CEECs (40% to CEFTA) and 38% to Maghreb, while the share of clothing also decreased to 64% in France OPT reimportation from the CEECs (71% from CEFTA) and 54% from Maghreb. The reimportation of textiles remained low. Cotton and synthetic fibers were still major OPT exports in all areas in 1997, while wool remained important in the CEEC export structure but no longer with Maghreb. Hosiery, other clothes, apparels, togs, rags and footwear remained significant items in the reimportation from all areas. *The 1993 division of labour lasted until 1997, but the whole textile-clothing industry lost some ground in favour of other product subgroups* in France OPT with the CEECs and Maghreb.

Exactly the same scenario is observed (Andreff and Boudier-Bensebaa, 2000) in the EU-15 OPT trade with the CEECs in the textile-clothing industry.

In addition to the textile-clothing industry, two other product subgroups had a non-negligible participation in France OPT with the CEECs and Maghreb. One is electrical equipment: 2% in OPT exports to the CEECs (4% to CEFTA) and 10% to Maghreb, 3% in OPT reimportation from the CEECs (5% from CEFTA) and 9% from Maghreb in 1993. The share of *electrical equipment in France OPT trade with both areas increased* up to 1997 and gained ground over the textile-clothing share. In 1997, its share in OPT exports to the CEECs was 17% (30% to CEFTA) and 27% to Maghreb, and 8% in OPT reimportation from the CEECs (19% from CEFTA) and 21% from Maghreb. Another product subgroup is worth being mentioned. Mechanical equipment accounted for 2% in France OPT exports to the CEECs and 1% to Maghreb in 1993, and less than 1% in OPT reimportation from the CEECs and 1% from Maghreb. Its share *increased from 1993 to 1997* when it reached 3% of OPT exports to the CEECs and 6% to Maghreb, and 1% in OPT reimportation from the CEECs and 5% from Maghreb. Electrical equipment and mechanical equipment producers seemed to be, in some way, the followers of textile-clothing main contractors in France OPT with both areas. This means that *electrical and mechanical equipment industries would probably supersede the textile-clothing industry in OPT relocation of production* to the CEECs and Maghreb after the total liberalization of the latter's industrial foreign trade with France (and EU-15).

Some specific products must be briefly alluded to. The French leather-saddlery industry also proceeded to the same downstream division of labour as the textile-clothing industry in both the CEECs and Maghreb, exporting leather (2% of OPT exports to the CEECs and 6% to Maghreb in 1997) and reimporting leather products (less than 1% of OPT reimportation from the CEECs and 2% from Maghreb). Chemical products were relatively important in OPT with the CEECs, in particular in France reimportation from the CIS, but were absent in OPT with Maghreb. French reimportation in chemicals from the CIS was concentrated on one country, Russia, and one product, the item 28 in the standard product classification, which refers to precious metals, radioactive elements and isotopes. This OPT relates to the treatment of fissile materials for the French nuclear industry in Russian nuclear plants, a flow initiated long ago in the former Soviet–French co-operation.

A comparison of the product structure between France and EU-15 OPT with the CEECs in 1997 (Andreff and Boudier-Bensebaa, 2000) reveals no surprise. The major items exported by EU-15 to the CEECs in this framework, are connected to the textile-clothing industry (wool, cotton, synthetic fibers, and then

clothing) with the most significant reimportation being clothing (hosiery, other clothes, apparels, togs, rags and footwear). Electrical equipment was of a comparable importance in France and EU-15 OPT exports and imports, while mechanical equipment was twice as important in EU-15 than in France OPT with the CEECs. The final point refers, to the recognized (CGP, 1999) product concentration on textile-clothing and electrical equipment: *the product distribution of EU (and France) OPT was quite specific compared with the product distribution of their overall trade, with the CEECs*. In overall trade, EU imports concentrated on clothing, motor cars, steel, mechanical equipment, chemical products and then electrical equipment and furniture (Andreff, 1998; Lemoine, 1999); the first EU exports were mechanical equipment, automobiles, chemical products, textiles, and then electrical equipment and food. It is clear, that subcontracting resorts to a vertical division of labour which is quite specific and relies on an international specialization which is different from the EU (France) overall trade with the CEECs.

1.3. CEEC and Maghreb specialization in outward-processing trade with France

The determinants of international specialization are similar in the trade of intermediary products and in the trade of final goods, as soon as the production process is internationally segmented (Fontagné et al., 1995). OPT is a subset of both trade in intermediary products (main contractor's country exports and thus subcontractor's country imports) and trade in final goods (reimportation by the main contractor's country and thus exports of the subcontractor's country). Therefore, we can use the current analyses of international specialization in either intermediary products or final goods, in the case of OPT. Products that are exported by France (EU) to be processed in the CEECs or Maghreb are intermediary products (or semi-finished products or spare parts) while they are reimported in the form of final goods (and semi-finished products and spare parts). Consequently, *OPT exports and OPT imports usually do not belong exactly to the same position in the standard product classification*, as we have noticed above (*1.2*). Thus, the CEECs and Maghreb OPT imports are achieved for products in the production of which they have a comparative disadvantage, and their OPT reexportation consists in final goods (or spare parts) in the production of which they have a comparative advantage. But, due to the specificity of OPT, it is even more relevant to assess the relative position of different Maghreb and CEE countries and areas, with regard to their specialization, than their obvious comparative advantages and disadvantages towards EU countries (here France).

We first use the Balassa index of revealed comparative advantage:

$$t_{jk} \quad \frac{\dfrac{X_{jk}}{X_{j.}}}{\dfrac{X_{.k}}{X_{..}}} \quad \text{and} \quad u_{jk} \quad \frac{\dfrac{M_{jk}}{M_{j.}}}{\dfrac{M_{.k}}{M_{..}}}$$

in which X_{jk} stands for OPT exports of the product k from the CEEC (j) to France; $X_{.k}$ stands for OPT exports of the product k from all extra-EU countries to France; $X_{j.}$ stands for overall OPT exports from the CEEC (j) to France; and $X_{..}$ stands for overall OPT exports from all extra-EU countries to France (the same definitions apply for M = imports). But we have interpreted the Balassa index analysis in a specific way in order to adapt it to the OPT case. One CEEC or Maghreb country (j) is considered to have a "subcontracting or OPT comparative advantage" in the product k if the ratio of the relative export structure is higher than 1 and if the ratio of the relative import structure is higher than 1. The higher ratio of a CEEC or Maghreb country, the higher its rank in the hierarchy of France OPT partners.

With regard to CEEC and Maghreb OPT exports of clothing products to France in 1997, the Balkans (mainly due to Romania) had the most important comparative advantage, followed by CEFTA (mainly due to Hungary and Poland) and then Morocco and Tunisia (Annex 4.1). This comparative advantage was more significant in OPT clothing exports to France than to EU-15 (Andreff and Boudier-Bensebaa, 2000). A comparative advantage in textiles existed for CEFTA, primarily due to Poland and the Czech Republic, and in 1993 and 1997, Morocco and Tunisia had a clear comparative advantage in OPT exports in the shoe industry (only in 1993 for CEFTA). On the other hand, in electrical equipment and mechanical equipment, we observe no comparative advantage or even a slight disadvantage, except for electrical equipment exported from the Czech Republic in 1997. This specialization structure on the CEEC and Maghreb OPT export side, in fact begins in 1993, with one exception; there is a comparative disadvantage in electrical equipment and mechanical equipment (in 1993).

In the CEEC and Maghreb OPT imports from France, the major comparative advantage in 1997, was in textiles, in particular for Morocco, then the CIS countries, CEFTA (mainly due to Hungary and Poland), the Balkan countries and Tunisia (Annex 4.2). In OPT clothing imports, the most significant comparative advantage was for the Balkan countries (primarily due to Romania), followed by Tunisia, CEFTA (mainly due to Poland) and the CIS countries. On the other hand, in electrical equipment and mechanical equipment, there was a strong comparative disadvantage, except for the Czech OPT imports from France. The same specialization structure and country (and area) hierarchy prevailed in 1993, without the

Czech comparative advantage in OPT electrical equipment imports. The comparative advantage was more marked in OPT CEEC and Maghreb imports from France, for most products, than from EU-15 (Andreff and Boudier-Bensebaa, 2000).

The specialization index based on the *contribution to the trade balance* eliminates the impact of macroeconomic factors on country competitiveness and sticks to the structural dimensions of international specialization. This index compares, for each product, the real trade balance between two countries to a "normal" trade balance, which is proportional to the share of each product in the overall trade between these two countries. This index here is weighted by the value of overall trade between each CEEC or Maghreb country and France in order to take into account the difference between the commercial sizes of these countries:

$$f_{jk} = (X_{jk} - M_{jk}) - \frac{X_{jk} - M_{jk}}{\sum_k (X_{jk} - M_{jk})} \cdot \sum_k (X_{jk} - M_{jk}) \cdot \frac{100}{\sum_k (X_{jk} - M_{jk})}.$$

When the index is higher than zero, it means a comparative advantage in the product *k* for the country *j* (i.e. for a CEEC or a Maghreb country), and an index lower than zero means a comparative disadvantage. The index is exclusively calculated here for OPT with France.

The index is, as expected, lower than zero for textile products and higher than zero for clothing in 1993 and 1997 (Annex 5). The negative contribution of textiles to the trade balance weakened from 1993 to 1997 in France OPT with all the sampled areas. In 1997 Morocco had the most negative contribution in textiles (the largest net importer country), followed by CEFTA (primarily due to Hungary and Poland), the CIS, the Balkans and Tunisia. However, Morocco also had the most positive contribution in clothing (the largest net exporter country) followed by CEFTA (mainly Hungary and Poland), and the Balkan countries ahead of Tunisia in 1997 (behind Tunisia in 1993). The contribution of mechanical equipment to the trade balance is small but rather negative. In 1993, the contribution of electrical equipment was small and positive for CEFTA and the four major CEECs, although it turned into a negative contribution for CEFTA (primarily due to Hungary) in 1997. For all other areas electrical equipment always had a small and negative contribution. Thus, France OPT specialization with the CEECs and Maghreb, contrasts to some extent with EU specialization in overall trade where the most significant positive contributions to trade balance are coming from mechanical equipment, chemical products, motor cars, and then steel, electrical equipment and wood-paper (Fontagné and Freudenberg, 1999). The most important negative contributions are due to energy, electronics, food and textiles.

2. A CROWDING-OUT OF MAGHREB BY CENTRAL AND EASTERN EUROPE IN FRANCE OUTWARD-PROCESSING TRADE

The three privileged geographical areas for production relocation by European firms are Maghreb, Eastern Europe and South-East Asia (Lemesle, 1995). The area privileged by French enterprises, before the transition in Eastern Europe, was Maghreb. Was it still true in the nineties, as far as relocation through subcontracting is concerned? A crowding out of Morocco and Tunisia by Hungary and Poland was assumed in overall trade with the EU, from 1990 to 1995 (Hammami and Lavallée, 1999). However the effects of preferential trade agreements between EU and the CEECs were tested, with a gravity model, and had a stagnating impact on EU trade with the South Mediterranean countries, from 1990–1996 (Buigues and Martinez Mongay, 1999). Can some similar effects be exhibited, in the case of OPT, between Maghreb and the CEECs?

We have evaluated the *market shares* of various CEEC subgroups and Maghreb, with regard to France's total OPT with all the CEEC and Maghreb countries, in 1993 and 1997 (Annex 6). The market share of France OPT exports to Maghreb declined during this period from 47% to 39%, with similar declines for both Morocco and Tunisia. Maghreb's market share in France OPT reimportation also declined, from 47% of the total in 1993 to 33% in 1997. This decline was of course compensated by the rise of the CEECs' market share in France OPT. Therefore, we can conclude that an *overall substitution of the CEECs to Maghreb occurred in France OPT*, more marked for reimportation than for export, with the Tunisian market share shrinking faster than Morocco's, particularly regarding reimportation. The *main winners of market shares were the Balkan countries* on both OPT export and import sides. The CEFTA market share slightly improved in France OPT exports and slightly deteriorated in France OPT reimportation. The CIS countries lost some ground in OPT exports but exhibited a significant improvement in their OPT import market share.

The substitution effect which was detrimental to Maghreb can be explained by the OPT evolution of some products. Maghreb market share regressed substantially in OPT exports of the three major products – textiles, clothing and electrical equipment – while it grew for mechanical equipment. The main Maghreb loss of market shares in textile OPT exports, favoured the Balkans and affected more Tunisia than Morocco. Maghreb (and also CEFTA) lost market shares taken by the Balkans in OPT exports of clothing, affecting more Tunisia than Morocco. Maghreb losses meant more CEFTA than Balkan gains in OPT exports of electrical equipment, but were detrimental to Tunisia, more so than Morocco. Maghreb gains in OPT mechanical exports were due to dramatic Tunisia gains (and Mo-

rocco losses) over the market shares of the Balkan and CIS countries, while CEFTA increased its market share.

The substitution effect in OPT imports is primarily due to the fall of the textile market share in reimportation from Maghreb (Morocco is more affected than Tunisia) which in 1997 benefited the Baltic states, in particular Lithuanian export of wool and synthetic fibers to France. In OPT imports of clothing, the weak market share of Maghreb (mainly Tunisia) left room for a strong improvement of the Balkan market share, and to a lesser extent, the CEFTA and CIS market shares. The fall of OPT imports of electrical equipment from Tunisia is only partly compensated by a slight rise in the Moroccan market share; this triggered Maghreb's market share to fall, and at the same time it benefited the CEFTA market share. France OPT imports of mechanical equipment from Morocco practically disappeared between 1993 and 1997 while it doubled, in terms of market share, from Tunisia; the market share more than doubled for OPT imports of this product from CEFTA.

A more acute analysis, based on the calculation of substitution elasticities between Maghreb and CEEC OPT, enables us to *distinguish a simple substitution effect from a crowding out effect*. If a smaller increase in the market share of an OPT flow (export or import) between France and Maghreb responds to a bigger increase in the market share of the same OPT flow between France and the CEECs, then elasticity is lower than 1. Thus, in an overall increasing market for OPT, the share of the CEECs is growing faster than Maghreb's, and the former partly substitutes the latter. We call this a dynamic substitution effect. On the other hand, if a decrease in the market share of an OPT flow between France and Maghreb responds to an increase in the market share of the same OPT flow between France and the CEECs, then elasticity is negative (lower than zero). Here Maghreb is partly crowded out from the OPT market with France due to the increase of the CEEC market share. We define such an evolution as a crowding out effect. Now, we observe *a crowding out effect of Maghreb by the CEECs* (mainly by the four major partners of France) *in OPT imports, from 1993 to 1997, while we witness only a substitution effect of the CEECs to Maghreb in OPT exports* during the same period *(Table 3)*. The overall crowding out effect on the import side is basically explained by the crowding out of Maghreb subcontractors by the CEEC (primarily Czech, Hungarian, Polish and Romanian) subcontractors in textiles and clothing. We note also a strong crowding out of Maghreb subcontractors in OPT exports of textiles, in particular under the pressure of the four major Eastern main contractors' countries (negative elasticity with an absolute value higher than 1). For the other products gathered in Table 3, there is a substitution effect detrimental to Maghreb, with an exception: Maghreb partly substitutes to the CEECs in OPT export of mechanical equipment (positive elasticity higher than 1).

Table 3

Substitution elasticities between Maghreb and Central and Eastern Europe
outward processing trade, 1993–1997

OPT	Export 1997/1993*		Import 1997/1993	
	Maghreb/CEECs	Maghreb/Major 4	Maghreb/CEECs	Maghreb/Major 4
Total	0.26	0.22	−0.09	−0.13
Textiles	−0.75	−1.41	−0.17	−0.45
Clothing	0.09	0.11	−0.58	−0.75
Electrical Equipment	0.18	0.17	0.34	0.34
Mechanical Equipment	4.10	2.15	0.45	0.30

* (Xm1997 – Xm1993) / Xm1993 divided by (Xc1997 – Xc1993) / Xc1993
with Xm: France OPT export to Maghreb; Xc: France OPT export to the CEECs
Major 4: the Czech Republic, Hungary, Poland, Romania
Source: authors' calculation from Eurostat

3. OUTWARD-PROCESSING TRADE IN THE FACE OF GROWING FOREIGN DIRECT INVESTMENT: A TRANSITIONAL PHENOMENON

The entry of FDI in the CEECs markedly accelerated between 1993 and 1997 *(Table 4)*. The CEECs had attracted eight times as much FDI inflow from the world than the three Maghreb countries as of 1993, and twice as much of the French FDI, with a strong concentration on CEFTA countries in both cases. Consequently, the inward stock of FDI from the world was double in the CEECs than in Maghreb in 1993, while the stock of French FDI was still larger in Maghreb (due to past historical relationships) than in the CEECs. Here again, we can observe a substitution effect. In 1997, the CEECs had attracted ten times more FDI inflow from the world than Maghreb, and only the Baltic states welcomed less FDI inflow than Algeria, Morocco and Tunisia combined. The overall inward stock of FDI was seven times larger in the CEECs than in Maghreb which had attracted a smaller FDI stock than both CEFTA and CIS countries. The inflow of French FDI was also ten times the size in the CEECs than in Maghreb in 1997, with a strong concentration in CEFTA countries and then in the Balkans. Now, the French FDI stock in the CEECs is three times greater than in Maghreb. The *former area has been substituted to the latter as a more important location in the strategy of French investors abroad*.

The question to be addressed is whether this geographical substitution is accompanied with a substitution (or a crowding out) of OPT by FDI. We focus only on the case of France OPT and FDI, though it brings to surface a more general debate in the economic literature today (Altzinger, 1999; Brenton and di Mauro, 1998) about the substitutability or complementarity between FDI and trade, initi-

Table 4

Inflow and inward stock of foreign direct investment in the CEECs and Maghreb from the world and from France, 1993–1997

	FDI inflow		FDI inward stock	
	1993	1997	1993	1997
From the world* to:				
CEECs	8,301	22,409	15,001	81,288
CEFTA	4,988	8,792	11,605	45,500
Balkans	307	2,303	910	6,471
Baltic states	237	1,143	303	3,461
CIS	2,769	10,171	2,183	25,856
Maghreb	994	2,048	7,153	11,444
From France** to:				
CEECs	1,678	6,668	3,441	17,198
CEFTA	1,622	4,451	3,129	13,138
Balkans	56	1,488	96	2,392
Baltic states	0	0	0	23
CIS	0	729	216	1,645
Maghreb	813	667	4,174	5,648

* In million dollars, *source:* UNCTAD (1999);
** In million francs, *source:* Banque de France

ated by Mundell (1957) who advocated the substitutability thesis (for the complementarity thesis, see Fontagné and Pajot, 1998). It is recognized, that the growth of CEEC exports coincides with a strong presence of FDI in some sectors; the automotive industry being the best example (Lemoine and Freudenberg, 1999), supporting the complementarity hypothesis. It is also expected, at least for CEFTA countries, that both trade and FDI not change significantly, in comparison to the last few years (Sass, 1999), expressing low profile support to complementarity. A more precise analysis should include the determinants of FDI. If FDI is market seeking, one must expect FDI and exports to be potential substitutes; they must be complementary if efficiency-seeking transnational corporations relocate their production in low (unit labour) cost host countries. Some recent econometric exercises (Alessandrini and Bosco, 1998) have not been able to demonstrate that globally complementarity is prevailing over substitutability for FDI and trade with the CEECs. Complementarity is significant in some sectors such as chemicals and electrical equipment. Substitutability prevails in food, milk and derivatives, metals, rubber and plastics. Evidence is mixed in machine building, textiles and clothing. These results highlight the non-linearity of the relationship between trade and FDI, which is usually assumed outside the context of Eastern Europe (Markusen and Venables, 1995). However outward processing trade is not direct trade.

Now we look at the possible substitution effect between France OPT and FDI, from 1993 to 1997. We have calculated an aggregated market value of inward flows in the CEECs and Maghreb, summing up OPT exports and FDI inflows from France (Annex 7). In 1993, the share of OPT was higher than FDI for the aggregated market (52%) also for Maghreb (61%) and lower in the case of the CEECs (46%). In 1997, the share of OPT diminished (26%) to the benefit of FDI in the CEECs – primarily due to the four major partners and the Balkans – while its share experienced a growth (69%) detrimental to FDI in Maghreb, due to a decline of French FDI inflow into Morocco from 1993 to 1997. At first sight, OPT and FDI may seem to be complementary in the CEECs, although FDI is gaining ground over OPT, exhibiting *a substitution effect lato sensu*. In Maghreb, there is an opposite substitution effect, in a stronger sense: OPT is gaining ground over a decreasing FDI. It is a *crowding out effect*. *Table 5* suggests the following comment. In the CEECs, from 1993 to 1997, each increase of, say, one Euro of French FDI is accompanied with only a 0.22 Euro increase of OPT: *FDI is partly substituting to OPT with France*. In Maghreb countries, OPT remains dynamic, though less than in the CEECs, while FDI falls: from 1993 to 1997, each increase of one Euro in France OPT export is accompanied with a 0.96 Euro decrease of French FDI. Thus, *France outward processing exports are crowding out French FDI in Maghreb* countries. This effect is mainly due to Morocco. Regardless, weaker or stronger, a *substitutability relationship* is at work between OPT and FDI.

Table 5

Substitution elasticities between France outward processing export and foreign direct investment in the CEECs and Maghreb, 1993–1997

CEECs	0.22	Maghreb	(–0.96)
CEFTA	0.27	Morocco	(–0.39)
Balkans	0.06	Tunisia	0.06
Four major CEECs	0.31		

Source: Authors' calculation from Eurostat and Banque de France data

Finally, how can we explain the observed tendency of French FDI to substitute to OPT in the CEECs? First, a simple factor is, the duty-free advantage of OPT was on the brink of disappearing in 1997, and it was rather sensible for French main contractors to give up OPT. This explains why the pace of OPT slowed down, not why FDI accelerated, except if some French firms took over their former CEEC subcontractors, or invested in some local processing enterprises in the host country. We lack microeconomic evidence here to support this view. The quality of the processed goods probably increased in the CEECs throughout the

industrial co-operation with French (EU) firms, in particular when the local subcontractor restructured and sharply adjusted to the main contractor's requirements. Again, microeconomic evidence is needed to confirm such an assumption, but we know that the quality of various CEEC exports increased, particularly in machine building and textile-clothing by the mid-nineties, compared with the late eighties (Landesmann and Burgstaller, 1997). In the same vein, resulting from years of subcontracting work with French firms, a possible increased competitiveness of CEEC subcontractors, made them more autonomous from (or even competing with) their main contractors, so that the latter then preferred to turn to FDI.

We would test more precisely two assumptions. First, OPT is a strategy of producers looking for lower unit labour costs abroad. On the other hand, some econometric studies (M. Andreff and W. Andreff, 1997; W. Andreff, 1999b; Meyer, 1998) have successfully tested the hypothesis that a large part of FDI in the CEECs was determined by market demand so far, and was achieved by Western firms conducting a market-seeking strategy. Under this assumption OPT and FDI are expected to be complementary as long as unit labour costs are low in the CEECs, OPT being undertaken in a cost-minimizing strategy and FDI being kept more for market-seeking strategies. But, since the unit labour cost increased in the CEECs, OPT became less attractive than a demand-oriented FDI (the latter being fueled by income (wage) increases). This *may pave the way for a partial substitution of FDI to OPT*. The second assumption stems from the idea that FDI requires a better investment climate and country-risk than OPT. The substitution of FDI to OPT then reflects a better, safer and more stable economic and political environment in most CEECs in 1997, than at the dawn of the transition, due to economic recovery, structural and institutional change, and soft changeover of political power between parties. To make the test feasible, we would reduce this factor to the eight EBRD qualitative indicators of progress in the transition process. They encompass large-scale privatization, small-scale privatization, governance and enterprise restructuring, price liberalization, trade and foreign exchange system, competition policy, banking reform and interest rate liberalization, and securities markets and non-bank financial institutions. A second test relies on the country-risk evaluation of the CEECs.

In 1993, the labour cost per hour was 1.34 DM in Romania, 1.68 DM in Bulgaria, 2.70 DM in Slovakia, 3.01 DM in the Czech Republic, 3.45 DM in Poland, and 4.54 DM in Hungary in comparison to 42.67 DM in West Germany (Schroeder, 1995). According to another estimation, the gross wage per month per employee was, in 1993, 30.3 Ecus in Ukraine, 53.0 Ecus in Russia, 87.9 Ecus in Romania, 99.7 Ecus in Bulgaria, 127.3 Ecus in Croatia, 149.5 Ecus in Slovakia, 170.5 Ecus in the Czech Republic, 184.2 Ecus in Poland, 252.8 Ecus in Hungary, and 570.2 Ecus in Slovenia, as compared to 1900.8 Ecus in Austria (Havlik, 1998)

and 1730.2 Ecus in France. Once their low level of productivity is taken into account, the CEECs are still left with a considerable advantage in unit labour costs (Nagarajan, 1994). The unit labour cost, including indirect costs, in CEFTA and the Balkan countries was between one tenth and two fifths of the Austrian level in 1993: 7.8% in Ukraine, 9.3% in Russia, 17.2% in Bulgaria, 17.6% in Slovakia, 18.5% in the Czech Republic, 20.4% in Romania, 26.6% in Croatia, 29.9% in Poland, 31.9% in Hungary and 40.8% in Slovenia, according to Havlik's calculation. Gross wages increased after the mid-nineties, productivity as well, but on average, less than real wages (W. Andreff, 1999a). As a result, the unit labour cost was on a growing trend in the CEECs. This trend is evidenced in *Table 6,* except for Hungary, from 1993–1998.

Table 6

Annual change in DM unit labour cost in some CEECs, 1993–1998 (%)

Country	1994	1995	1996	1997	1998	1993–1998
Bulgaria	−32.1	5.4	−21.0	44.1	36.6	11.3
Croatia	33.6	25.9	2.0	0.4	−1.2	70.2
Czech Republic	11.3	1.5	10.0	0.9	4.3	30.8
Estonia	61.7	35.2	19.2	−5.1	24.0	206.6
Hungary	−3.6	−19.1	−3.4	0.6	−4.7	−27.8
Latvia	85.7	2.8	−0.9	18.4	2.6	129.8
Lithuania	85.2	23.3	30.4	32.8	11.9	342.3
Poland	−6.2	2.9	9.0	3.0	3.2	11.9
Romania	−1.4	−4.2	0.4	−7.3	40.2	23.3
Russia	79.8	−4.9	54.6	16.9	n.a.	n.a.
Slovakia	0.7	5.5	14.0	12.9	−5.0	30.0
Slovenia	−2.1	3.7	−1.6	4.8	2.8	7.6

Source: EBRD (1999)

In testing our assumptions, we unfortunately have only small country samples to work with. This is because there are only 27 CEECs, and data is missing for some countries (i.e. the unit labour cost). There are also CEECs in which FDI or OPT is non existent in some years. With a small number of observations (smaller than thirty), it is not significant enough to undertake sophisticated analyses based on linear regression. We have however, calculated rank correlations between FDI and OPT on one hand, and various aforementioned economic variables or indicators on the other. Such a methodology is recommended in order to test the dependence or independence between two variables on the basis of small samples. This method does not depend on the underlying distribution of variables (namely it does not depend on the assumption of a Gaussian distribution).

Table 7

Rank correlation between FDI, OPT and other variables and indicators

Variable 1	Variable 2*	Rank correlation coefficient	CEECs number	Level of significance (%)	Test
French FDI 1997	GDP 1997	0.5996	18	1	significant
French FDI 1994	Variation of ULC in 1993	0.4048	8	35	non significant
French OPT 1994	Variation of ULC in 1993	(–0.4818)	11	15	non significant
French FDI 1997	Variation of ULC in 1996	(–0.5182)	11	10	non significant
French OPT 1997	Variation of ULC in 1996	(–0.4000)	11	20	non significant
French FDI 1997	Average EBRD indicator 1996	0.4971	16	5	significant
French OPT 1997	Average EBRD indicator 1996	0.1649	19	50	non significant
French FDI 1994	Country-risk rank in 1993	(–0.3818)	10	17	non significant
French OPT 1994	Country-risk rank in 1993	(–0.5607)	15	3.5	significant
French FDI 1997	Country-risk rank in 1996	(–0.6882)	16	0.5	significant
French OPT 1997	Country-risk rank in 1996	(–0.5158)	19	2	significant

* Variation of ULC: variation of D-Mark unit labour cost as given in Table 6. Average EBRD indicator: average note obtained by a country with the 8 EBRD indicators; country-risk ranking published in Euromoney

The Spearman rank correlation is calculated as follows: $r_s = 1 - \dfrac{6 \sum_i d_i^2}{n(n^2 - 1)}$

where d_i is the difference, for each country i, between its ranking according to the two variables. Looking at the Spearman table, we can conclude at a concordance (a positive coefficient close to 1) or discordance (a negative coefficient close to –1) or no relation (a coefficient close to zero) between the ranks of two variables. If the coefficient of rank correlation is not significant, then the two variables are independent.

The first test verifies whether French FDI is attracted by the market size of the CEECs. Taking GDP as a proxy for the market size of each country, we have calculated the rank correlation between French FDI inflows and GDP of host countries for eighteen CEECs whose data is available for 1997. We observe *(Table 7)* a concordance between the two variables, which are significantly correlated, a result that supports the idea of a primarily market-seeking strategy followed by French firms investing in the CEECs.

We have calculated the rank correlation between French FDI (then OPT) of one year and the variation of the unit labour cost in the previous year, in view of assessing whether FDI (OPT) does or does not react to a change in labour cost. The test is performed at the beginning and at the end of our observation period. The correlation coefficient is negative, as expected, meaning that a lower unit labour cost should be in concordance with a higher FDI or OPT (with the exception of FDI in 1994, but this is probably due to the small number of observations). How-

ever, the test is not significant, at the usual 5% threshold, for either the relation be-
tween FDI and the unit labour cost or the relation between the latter and OPT. The
labour cost is not a major determinant of French FDI in the CEECs which con-
firms a result found for all FDI in the region (M. Andreff and W. Andreff, 1997;
Meyer, 1998). What is more surprising, given the importance of labour cost in the
literature on production relocation and OPT, is the absence of a significant rela-
tion between OPT and the unit labour cost, at least in the French case. In response
to our first assumption, this is a market-oriented FDI that substitutes to OPT be-
tween France and the CEECs. However, this substitution is not triggered much by
the increase of labour costs in the CEECs which has often been considered to be
influential on OPT.

We turn to our second assumption. The rank correlation between French FDI in
the CEECs in 1997 and the average of the eight EBRD indicators of institutional
improvement in 1996 is significant, at the 5% threshold, and exhibits a positive
sign. This means that the more a CEEC has developed its market-oriented institu-
tions in the previous year, the more it will attract a French FDI inflow in the cur-
rent year. On the other hand, even though the relation between OPT and the aver-
age EBRD indicator shows the expected positive sign, the rank correlation coeffi-
cient is weak and the test is not significant at all. Therefore, it seems that (French)
FDI requires more institutional preconditions to be attracted to the host countries
(CEECs) than OPT to be developed with the same partners. Once the mar-
ket-friendly institutional framework has been upgraded in a number of CEECs,
FDI tends to substitute to OPT, particularly in those CEECs more advanced in in-
stitutional reforms (roughly speaking, the CEFTA countries). Such a factor is also
likely to explain that CEFTA countries, due to more comprehensive institutional
reforms, have attracted more FDI than Balkan countries, whereas the latter are
now challenging the former with regard to OPT expansion. Finally, the absence of
a significant relation between OPT and market-friendly institutions is also mean-
ingful in retrospect. We refer to the pre-transition period when OPT was yet link-
ing West European (French) firms to East European subcontractors while the in-
stitutional framework was not incentive to (or was forbidding) FDI.

Our last calculated rank correlation is between French FDI (OPT) and the rank-
ing of the CEECs according to their evaluated country-risk one year before. In
1994, the correlation between OPT and the country-risk is significant and has the
expected negative sign, meaning that the higher country-risk, the lower OPT.
There is no significant relation between French FDI and country-risk which is
quite understandable because French firms only achieved investments in a small
sub-sample of ten CEECs (out of twenty-seven) and were absent, as direct inves-
tors, from most CEECs in 1994. The picture changed in 1997. The country-risk,

on average, improved (lowered) in most CEECs and this factor heavily contributed to the attraction of French FDI in the region (sixteen countries out of twenty-seven). The correlation between FDI and country-risk has become even more significant than the one linking OPT and country-risk in 1997; this result fits with the evidence of FDI substituting to OPT in an upgraded economic and political environment in a number of CEECs.

CONCLUSION

Our statistical work has exhibited that France OPT with the CEECs and Maghreb developed from 1993 to 1997 with a high momentum, higher in the former than in the latter area. We have found a substitution and even a crowding out effect of France OPT with Maghreb by France OPT with the CEECs. We have tested a substitution relationship between French FDI and OPT, detrimental to OPT from 1993 to 1997 in the case of the CEECs. In Maghreb, a crowding out effect seems to prevail, but here, French FDI is crowded out by the development of France OPT, primarily in the case of Morocco. The substitution of French FDI to OPT in the CEECs is explained by a number of factors like the abolition of tax privileges for OPT in the EU-CEEC relations, the upgraded quality of products and competitiveness of more autonomous East European subcontractors, and – statistically tested – by a market-seeking FDI, a non-significant impact of labour costs on both FDI and OPT, a determinant role of institutional reforms and lower country-risk in attracting FDI instead of OPT.

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Annex 1

France outward processing trade with the CEECs and Maghreb:
values and percentage in overall trade, 1993 and 1997

	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	CEECs	Morocco	Algeria	Tunisia	Maghreb
Export 1993													
OPT*	43,214	11,398	41,198	45,600	123,169	608	53,429	37,133	214,339	91,014	166	97,974	189,154
OPT/OT **	5.66	2.75	10.87	11.55	5.95	0.58	7.21	2.31	4.74	4.59	0.01	7.07	3.60
Import 1993													
OPT *	56,728	13,387	67,139	57,684	166,913	739	67,509	64,345	299,506	121,594	205	148,620	270,419
OPT/OT % **	9.72	5.58	23.39	26.02	10.31	0.71	13.51	2.63	6.41	6.72	0.02	16.68	6.93
Export 1997													
OPT *	64,500	21,986	75,564	88,640	182,359	1090	128,578	40,168	352,195	110,150	11	110,992	221,153
OPT/OT % **	3.12	2.06	9.20	16.35	3.53	0.41	12.25	1.11	3.48	4.70	0.00	6.00	3.55
Import 1997													
OPT *	88,365	24,399	77,669	100,501	219,138	2858	157,353	134,269	513,618	128,616	154	124,757	253,527
OPT/OT % **	8.58	4.38	11.48	23.93	7.70	1.52	22.44	3.36	6.64	5.70	0.01	9.88	4.63

* Outward processing trade, in thousand Ecus
** Ratio of OPT to overall trade in percentage
Source: Eurostat

Annex 2

Distribution of France outward processing trade by country and geographical area,
1993 and 1997 (%)

	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	CEECs	Morocco	Algeria	Tunisia	Maghreb
Export 1993	20.16	5.32	19.22	21.27	57.46	0.28	24.93	17.32	100.00	48.12	0.09	51.80	100.00
Import 1993	18.94	4.47	22.42	19.26	55.73	0.25	22.54	21.48	100.00	44.97	0.08	54.96	100.00
Export 1997	18.35	6.25	21.50	25.22	51.88	0.31	36.38	11.43	100.00	49.81	0.00	50.19	100.00
Import 1997	17.20	4.75	15.12	19.57	42.67	0.56	30.64	26.14	100.00	50.73	0.06	49.21	100.00

Source: Eurostat

Annex 3a

Distribution of France outward processing trade by product
in 1993

Export 1993

CEFTA			CEECs			Maghreb		
Product code	%	summed %	Product code	%	summed %	Product code	%	summed %
51	15.55	15.55	61	15.26	15.26	52	21.72	21.72
55	14.33	29.88	55	14.26	29.52	85	10.07	31.78
62	7.80	37.68	51	10.90	40.42	55	8.47	40.25
41	7.31	44.99	62	8.90	49.31	60	8.38	48.64
54	6.92	51.91	28	7.81	57.12	62	7.24	55.88
52	6.39	58.30	52	5.70	62.82	51	5.78	61.66
60	6.39	64.69	54	5.64	68.46	41	5.33	66.99
61	5.80	70.49	41	4.48	72.94	61	5.19	72.19
64	5.40	75.88	60	4.17	77.11	58	4.36	76.55
59	4.68	80.57	64	3.20	80.30	50	4.30	80.85
Textile	58.63%		Textile	46.93%		Textile	58.79%	
Clothing	14.39%		Clothing	24.65%		Clothing	12.64%	
Mec. Eqt*	0.95%		Mec. Eqt*	1.88%		Mec. Eqt*	1.11%	
Elect. Eqt**	3.63%		Elect. Eqt**	2.24%		Elect. Eqt**	10.07%	

Import 1993

CEFTA			CEECs			Maghreb		
Product code	%	summed %	Product code	%	summed %	Product code	%	summed %
62	59.73	59.73	62	48.68	48.68	62	57.20	57.20
61	15.22	74.95	61	20.72	69.40	61	17.20	74.39
64	12.95	87.89	28	11.71	81.11	85	8.71	83.10
85	5.46	93.35	64	8.24	89.34	64	5.93	89.04
42	1.37	94.72	85	3.12	92.46	42	2.80	91.83
63	1.35	96.07	87	1.16	93.62	91	1.96	93.80
73	0.65	96.72	33	1.09	94.71	63	1.72	95.51
53	0.47	97.18	42	0.80	95.50	84	1.39	96.90
84	0.42	97.61	63	0.76	96.26	87	0.75	97.65
95	0.32	97.93	94	0.51	96.77	90	0.67	98.32
Textile	0.79%		Textile	0.51%		Textile	0.50%	
Clothing	76.29%		Clothing	70.16%		Clothing	76.11%	
Mec. Eqt*	0.42%		Mec. Eqt*	0.38%		Mec. Eqt*	1.39%	
Elect. Eqt**	5.46%		Elect. Eqt**	3.12%		Elect. Eqt**	8.71%	

* Mec. Eqt = Mechanical Equipment
** Elect. Eqt = Electrical Equipment
Source: Eurostat

Annex 3b

Distribution of France outward processing trade by product
in 1997

Export 1997

CEFTA			CEECs			Maghreb		
Product code	%	summed %	Product code	%	summed %	Product code	%	summed %
85	30.28	30.28	61	19.00	19.00	85	26.87	26.87
55	13.84	44.11	85	17.13	36.13	52	14.12	40.99
61	9.24	53.35	55	14.06	50.19	62	6.05	47.04
51	8.82	62.17	62	10.67	60.86	41	5.98	53.01
52	4.71	66.88	51	7.88	68.75	84	5.81	58.82
58	4.65	71.53	52	5.16	73.91	58	5.78	64.60
62	4.41	75.94	58	3.39	77.30	61	5.70	70.30
84	3.77	79.71	28	3.14	80.44	60	5.59	75.89
54	2.68	82.38	84	2.58	83.02	55	5.37	81.25
60	2.65	85.03	41	2.29	85.31	50	3.82	85.07
Textile	41.90%		Textile	37.93%		Textile	37.85%	
Clothing	14.37%		Clothing	30.11%		Clothing	11.79%	
Mec. Eqt*	3.77%		Mec. Eqt*	2.58%		Mec. Eqt*	5.81%	
Elect. Eqt**	30.28%		Elect. Eqt**	17.13%		Elect. Eqt**	26.87%	

Import 1997

CEFTA			CEECs			Maghreb		
Product code	%	summed %	Product code	%	summed %	Product code	%	summed %
62	52.35	52.35	62	42.92	42.92	62	39.08	39.08
85	18.62	70.97	61	20.17	63.09	85	20.50	59.58
61	15.84	86.82	28	18.57	81.66	61	13.15	72.73
84	3.01	89.83	85	8.34	90.00	64	10.26	82.99
63	2.63	92.45	64	3.19	93.19	84	5.07	88.06
64	1.44	93.89	84	1.42	94.60	90	4.12	92.18
87	1.22	95.12	63	1.17	95.77	63	2.04	94.22
73	0.83	95.95	87	0.74	96.52	42	1.58	95.80
42	0.82	96.76	42	0.46	96.98	88	1.42	97.22
53	0.81	97.58	55	0.42	97.39	65	0.72	97.95
Textile	1.16%		Textile	0.97%		Textile	0.33%	
Clothing	70.82%		Clothing	64.25%		Clothing	54.27%	
Mec. Eqt*	3.01%		Mec. Eqt*	1.42%		Mec. Eqt*	5.07%	
Elect. Eqt**	18.62%		Elect. Eqt**	8.34%		Elect. Eqt**	20.50%	

* Mec. Eqt = Mechanical Equipment
** Elect. Eqt = Electrical Equipment
Source: Eurostat

Annex 4.1

Revealed comparative advantages of the CEECs and Maghreb in outward processing export to France

a) Export to France in 1997

Product	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	Morocco	Tunisia
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.98	0.00	0.00
41	0.00	0.00	0.00	0.00	0.37	0.00	3.42	0.00	9.27	1.19
Textile	*5.46*	*2.77*	*0.34*	*0.09*	*2.70*	*189.87*	*0.14*	*0.03*	*0.77*	*0.77*
of which 50	0.00	0.00	4.19	0.00	1.86	0.00	0.00	0.00	0.00	0.00
51	0.05	0.16	1.55	0.32	0.68	665.77	0.56	0.00	0.00	0.00
52	0.28	23.76	0.00	0.55	3.08	0.00	0.63	0.11	3.04	1.88
54	2.76	0.00	4.39	0.00	4.00	0.00	0.00	0.00	3.79	0.00
55	1.73	0.08	0.68	0.08	1.06	635.74	0.19	0.07	0.24	0.00
58	0.07	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.27	2.05
60	0.74	11.47	0.22	0.08	1.74	0.00	0.05	0.00	4.55	0.02
Clothing	*3.18*	*0.83*	*3.24*	*4.02*	*2.96*	*0.75*	*3.65*	*1.15*	*2.50*	*2.03*
of which 61	2.51	1.28	2.77	8.37	2.46	0.00	6.70	0.12	1.63	2.48
62	3.35	0.57	3.51	2.49	3.09	1.04	2.60	1.58	2.91	1.69
64	0.02	0.02	0.25	0.15	0.73	0.00	4.24	0.00	4.04	6.36
Mec. Eqt (84)	*0.08*	*0.61*	*0.05*	*0.01*	*0.13*	*0.00*	*0.01*	*0.01*	*0.00*	*0.45*
Elect. Eqt (85)	*0.94*	*2.35*	*1.02*	*0.07*	*1.02*	*0.00*	*0.07*	*0.00*	*1.18*	*1.07*
90	0.06	0.00	0.02	0.00	0.03	0.12	0.02	0.02	0.36	2.37

b) Export to France in 1993

Product	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	Morocco	Tunisia
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.22	0.00	0.00
41	0.26	6.51	2.27	0.00	1.52	0.00	0.00	0.11	0.48	1.08
Textile	*3.34*	*4.15*	*0.51*	*0.39*	*1.74*	*12.56*	*0.44*	*0.10*	*1.54*	*0.75*
of which 50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	4.17	83.48	1.09	1.98	8.55	0.00	1.69	0.25	0.00	0.16
52	0.83	0.00	0.26	0.00	0.46	0.00	2.88	0.09	0.68	0.36
54	0.84	0.00	0.39	0.00	0.44	0.00	0.00	0.00	0.13	0.18
55	3.16	27.04	3.07	2.88	4.48	26.96	2.46	0.98	0.85	0.72
58	0.04	0.00	0.05	0.00	0.03	0.00	0.00	0.01	2.73	1.03
60	0.26	0.00	0.99	0.00	0.52	0.00	0.00	0.15	0.55	1.46
Clothing	*2.70*	*1.45*	*3.04*	*3.20*	*2.70*	*3.20*	*3.04*	*1.33*	*2.78*	*2.63*
of which 61	3.05	1.34	1.64	7.71	2.20	0.55	7.06	0.82	1.38	3.39
62	2.57	1.48	3.56	1.78	2.87	4.06	1.78	1.53	3.29	2.30
64	4.11	13.96	1.63	0.21	5.02	0.00	1.76	0.00	1.40	3.05
Mec. Eqt (84)	*0.03*	*0.02*	*0.01*	*0.02*	*0.02*	*0.01*	*0.01*	*0.02*	*0.09*	*0.06*
Elect. Eqt (85)	*0.29*	*0.49*	*0.31*	*0.00*	*0.27*	*0.19*	*0.00*	*0.01*	*0.35*	*0.49*
90	0.02	0.28	0.03	0.00	0.05	0.00	0.08	0.06	0.02	0.37

Source: Eurostat

Annex 4.2

Revealed comparative advantages of the CEECs and Maghreb in outward processing import from France

a) Import from France in 1997

Product	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	Morocco	Tunisia
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.69	0.00	0.00
41	0.45	1.28	0.02	0.00	1.76	0.00	4.22	0.01	8.73	4.10
Textile	*4.81*	*0.48*	*4.26*	*1.97*	*4.23*	*8.96*	*2.72*	*5.43*	*5.55*	*2.11*
of which 50	0.12	0.00	0.26	0.05	0.18	0.00	0.04	0.00	5.78	0.00
51	7.09	0.41	7.30	3.69	6.95	34.92	4.10	8.84	1.27	0.89
52	2.69	0.42	1.14	1.21	2.37	2.86	2.54	3.80	9.75	4.46
54	6.01	0.21	9.33	2.75	7.00	17.51	3.19	5.03	2.68	2.01
55	8.16	1.03	4.86	3.39	5.72	2.32	4.47	10.63	3.04	1.41
58	1.01	0.46	7.95	0.88	3.99	18.19	1.78	1.18	7.52	2.42
60	3.50	0.00	3.26	0.97	3.39	5.29	0.97	2.92	10.48	3.87
Clothing	*4.41*	*1.92*	*1.26*	*13.01*	*2.64*	*0.00*	*10.74*	*2.13*	*0.40*	*3.92*
of which 61	4.82	2.04	1.26	13.67	2.87	0.00	12.08	0.03	0.24	3.29
62	3.29	1.17	1.26	12.30	2.05	0.00	9.00	5.34	0.64	4.96
64	0.00	0.11	0.83	0.00	0.36	0.00	4.70	0.00	0.39	16.49
Mec. Eqt (84)	*0.24*	*1.59*	*0.10*	*0.05*	*0.34*	*0.00*	*0.05*	*0.35*	*0.02*	*1.03*
Elect. Eqt (85)	*0.42*	*1.17*	*0.94*	*0.12*	*0.68*	*0.00*	*0.09*	*0.01*	*0.56*	*0.65*
90	0.02	0.11	0.32	0.00	0.15	0.39	0.00	0.10	0.79	1.15

b) Import from France in 1993

Product	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	Morocco	Tunisia
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.90	0.00	0.03
41	5.62	3.56	1.24	0.20	4.90	0.00	0.74	0.00	3.46	3.70
Textile	*3.61*	*2.82*	*4.69*	*1.49*	*3.82*	*5.51*	*1.72*	*2.42*	*4.51*	*3.21*
of which 50	0.04	0.01	0.17	0.00	0.29	0.00	0.01	0.01	5.27	0.00
51	6.32	2.83	9.40	2.26	7.04	5.22	2.06	2.08	1.03	4.09
52	2.02	3.07	1.19	0.32	1.74	0.00	0.70	2.17	8.99	3.04
54	8.04	1.06	5.21	2.08	5.69	40.60	3.08	2.80	2.97	2.52
55	3.85	2.23	8.34	3.97	4.73	1.03	4.12	5.54	2.55	3.02
58	1.22	0.36	1.80	0.19	1.54	1.11	1.14	0.89	4.63	5.18
60	2.49	4.63	5.24	0.29	3.96	8.15	0.28	1.24	4.12	6.20
Clothing	*3.45*	*1.37*	*2.69*	*13.39*	*2.77*	*0.73*	*12.08*	*0.81*	*0.71*	*4.04*
of which 61	3.81	0.35	0.26	18.66	2.09	0.00	17.09	0.18	0.38	3.25
62	2.55	2.32	5.67	7.63	3.40	0.86	6.58	1.60	1.06	5.10
64	7.43	30.22	2.62	0.75	10.48	0.00	0.76	0.00	0.21	2.06
Mec. Eqt (84)	*0.02*	*0.32*	*0.02*	*0.19*	*0.06*	*0.12*	*0.18*	*0.26*	*0.12*	*0.04*
Elect. Eqt (85)	*0.16*	*0.22*	*0.11*	*0.00*	*0.12*	*0.00*	*0.01*	*0.01*	*0.29*	*0.35*
90	0.03	0.45	0.00	0.04	0.06	0.00	0.32	0.00	0.02	0.47

Source: Eurostat

Annex 5

Contribution of outward processing trade to foreign trade balance of the CEECs and Maghreb
(in percentage)

a) in 1997

Product	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	Morocco	Tunisia
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.43	0.00	0.00
41	−0.21	−0.59	−0.01	0.00	−0.81	0.00	−1.94	0.00	−4.01	−1.90
Textile	*−22.11*	*−1.80*	*−21.03*	*−9.69*	*−20.20*	*−2.87*	*−13.30*	*−19.04*	*−27.16*	*−10.22*
of which 50	−0.08	0.00	−0.17	−0.03	−0.12	0.00	−0.02	0.00	−3.81	0.00
51	−4.39	−0.26	−4.61	−2.33	−4.37	−11.07	−2.57	−3.98	−0.80	−0.56
52	−2.61	−0.04	−1.14	−1.19	−2.29	−2.27	−2.49	−2.68	−9.60	−4.39
54	−1.12	−0.04	−1.78	−0.52	−1.32	−2.68	−0.60	−0.68	−0.50	−0.38
55	−9.54	−1.24	−5.84	−4.07	−6.81	23.71	−5.34	−9.11	−3.64	−1.70
58	−0.57	−0.27	−4.63	−0.51	−2.30	−8.47	−1.03	−0.49	−4.34	−1.27
60	−1.32	0.20	−1.27	−0.37	−1.28	−1.65	−0.37	−0.81	−3.98	−1.50
Clothing	*25.36*	*4.64*	*35.29*	*12.69*	*27.99*	*7.20*	*14.27*	*5.64*	*28.62*	*13.62*
of which 61	0.31	0.83	6.87	4.88	3.28	0.00	2.06	0.25	4.82	2.66
62	24.23	3.53	28.39	7.81	23.77	7.05	12.21	5.39	23.81	8.93
64	0.02	0.00	0.07	0.14	0.64	0.00	3.18	0.00	3.90	2.83
Mec. Eqt (84)	*−0.37*	*−1.88*	*0.04*	*−0.17*	*−0.38*	*0.00*	*−0.17*	*−1.27*	*−0.09*	*−0.56*
Elect. Eqt (85)	*−0.72*	*−4.52*	*−11.63*	*−2.01*	*−5.78*	*0.00*	*−1.28*	*−0.13*	*−1.61*	*−4.74*
90	0.06	−0.12	−0.34	0.00	−0.13	−0.23	0.03	−0.06	−0.38	2.22

b) in 1993

Product	Poland	Czech Rep.	Hungary	Romania	CEFTA	Baltic st.	Balkans	CIS	Morocco	Tunisia
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.37	0.00	−0.02
41	−4.11	−2.59	−0.85	−0.15	−3.56	0.00	−0.55	0.00	−2.52	−2.63
Textile	*−26.43*	*−20.57*	*−33.82*	*−11.17*	*−28.26*	*−39.06*	*−12.93*	*−17.17*	*−33.52*	*−23.43*
of which 50	−0.03	0.00	−0.14	0.00	−0.24	0.00	−0.01	−0.01	−4.38	0.00
51	−6.82	−2.59	−9.77	−2.45	−7.55	−5.70	−2.23	−2.13	−1.12	−4.33
52	−3.64	−5.62	−2.05	−0.59	−3.12	0.00	−1.25	−3.71	−16.19	−5.36
54	−4.79	−0.64	−2.98	−1.25	−3.38	−24.44	−1.85	−1.58	−1.77	−1.47
55	−5.68	−2.96	−11.87	−5.90	−6.93	−1.15	−6.12	−7.77	−3.78	−4.38
58	−0.53	−0.16	−0.75	−0.08	−0.67	−0.49	−0.50	−0.37	−1.72	−2.09
60	−1.97	−3.71	−3.97	−0.23	−3.11	−6.52	−0.22	−0.92	−3.25	−4.76
Clothing	*28.64*	*16.84*	*33.89*	*10.29*	*30.25*	*42.83*	*11.40*	*15.45*	*36.65*	*25.47*
of which 61	5.18	4.14	5.01	0.76	4.60	1.88	0.69	2.39	4.15	6.92
62	23.43	12.69	28.86	9.62	25.37	40.91	10.79	13.07	32.40	17.32
64	3.32	10.15	1.35	0.08	3.69	0.00	2.04	0.00	1.71	3.25
Mec. Eqt (84)	*0.11*	*−2.09*	*0.01*	*−1.24*	*−0.26*	*−0.83*	*−1.20*	*−1.58*	*0.01*	*0.26*
Elect. Eqt (85)	*0.40*	*1.43*	*1.34*	*0.00*	*0.89*	*1.94*	*−0.12*	*−0.09*	*−0.95*	*−0.48*
90	−0.02	−0.41	0.04	−0.07	−0.04	0.00	−0.47	0.08	−0.01	−0.30

Source: Eurostat

Annex 6

CEEC and Maghreb market shares in outward processing trade with France,
1993 and 1997 (in percentage)

Export 1993								
	CEFTA	Baltic st.	Balkans	CIS	CEECs	Morocco	Tunisia	Maghreb
Total	30.53	0.15	13.24	9.20	53.12	22.56	24.28	46.88
Textile	34.10	0.24	6.66	6.49	47.49	29.72	22.78	52.51
Clothing	23.09	0.03	43.69	2.04	68.85	4.35	26.80	31.15
Mec. Eqt (84)	19.17	0.18	23.56	22.94	65.86	25.36	8.42	34.14
Elect. Eqt (85)	18.78	0.00	0.76	0.60	20.13	34.64	45.22	79.87

Export 1997								
	CEFTA	Baltic st.	Balkans	CIS	CEECs	Morocco	Tunisia	Maghreb
Total	31.81	0.19	22.43	7.01	61.43	19.21	19.36	38.57
Textile	35.17	0.45	15.93	9.93	61.48	27.87	10.65	38.52
Clothing	19.84	0.00	56.90	3.53	80.26	1.80	17.93	19.74
Mec. Eqt (84)	31.32	0.00	3.08	7.08	41.48	1.24	57.29	58.52
Elect. Eqt (85)	46.11	0.00	4.13	0.14	50.37	22.76	26.86	49.63

Import 1993								
	CEFTA	Baltic st.	Balkans	CIS	CEECs	Morocco	Tunisia	Maghreb
Total	29.29	0.13	11.85	11.29	52.55	21.34	26.08	47.45
Textile	45.89	1.46	4.67	1.01	53.03	29.50	17.47	46.97
Clothing	30.62	0.16	13.94	5.80	50.52	22.95	26.51	49.48
Mec. Eqt (84)	14.44	0.02	3.63	5.11	23.20	42.82	32.29	76.80
Elect. Eqt (85)	27.69	0.09	0.20	0.39	28.37	26.41	45.22	71.63

Import 1997								
	CEFTA	Baltic st.	Balkans	CIS	CEECs	Morocco	Tunisia	Maghreb
Total	28.57	0.37	20.51	17.50	66.95	16.77	16.26	33.05
Textile	43.66	40.02	1.65	0.26	85.59	7.28	7.13	14.41
Clothing	33.19	0.11	29.38	7.90	70.57	16.44	12.99	29.43
Mec. Eqt (84)	32.77	0.00	1.39	1.98	36.14	0.46	63.20	63.86
Elect. Eqt (85)	43.04	0.00	2.10	0.05	45.18	29.18	25.62	54.82

Source: Eurostat

Annex 7

French foreign direct investment and outward processing export in the CEECs and Maghreb,
1993 and 1997

1993							
		M4	CEFTA	Baltic st.	Balkans	CIS	CEECs
OPT	value	141,410	123,169	608	53,429	37,133	214,339
	%	37.15	33.45	100.00	86.33	100.00	45.82
FDI	value	239,279	245,019	0	8,459	0	253,479
	%	62.85	66.55	0.00	13.67	0.00	54.18
Distribution FDI		63.59	65.11	0.00	2.25	0.00	67.36
Total =	FDI+OPT	380,689	368,188	608	61,888	37,133	467,818

		Morocco	Tunisia	Maghreb	Whole area
OPT	value	91,014	97,974	189,154	403,493
	%	47.72	86.87	60.63	51.74
FDI	value	99,700	14,804	122,812	376,291
	%	52.28	13.13	39.37	48.26
Distribution FDI		26.50	3.93	32.64	100.00
Total =	FDI+OPT	190,714	112,778	311,966	779,784

1997							
		M4	CEFTA	Baltic st.	Balkans	CIS	CEECs
OPT	value	250,690	182,359	1,090	128,578	40,168	352,195
	%	22.88	21.28	100.00	36.31	26.66	25.85
FDI	value	844,993	674,509	0	225,493	110,473	1,010,476
	%	77.12	78.72	0.00	63.69	73.34	74.15
Distribution FDI		76.02	60.68	0.00	20.29	9.94	90.91
Total =	FDI+OPT	1,095,683	856,868	1,090	354,071	150,641	1,362,671

		Morocco	Tunisia	Maghreb	Whole area
OPT	value	110,150	110,992	221,153	573,348
	%	70.78	70.53	68.63	34.03
FDI	value	45,462	46,372	101,078	1,111,554
	%	29.22	29.47	31.37	65.97
Distribution FDI		4.09	4.17	9.09	100.00
Total =	FDI+OPT	155,612	157,364	322,231	1,684,902

M4 = Four major partners: Poland, the Czech Republic, Hungary and Romania
Source: Eurostat for OPT, Banque de France for FDI (Francs converted into Ecus at 1993 and 1997 rates)

TWO-DIGIT PRODUCT STANDARD CLASSIFICATION (COMEXT)

Code   Product subgroup

28   Non-organic chemical products, compounds of precious metals, radioactive elements and isotopes
33   Essential and resin oils, perfume products, cosmetic preparations
41   Hides, pelts and leather
42   Leatherworks, saddlery products
50   Silk
51   Wool, crude coats, horsehair threads and fabrics
52   Cotton
53   Other textile vegetable fibres, paper threads and fabrics
54   Synthetic and man-made threads
55   Synthetic and man-made fibres
58   Special fabrics, tufted textiles, lacemakings, tapestries, trimmings, embroideries
60   Fabrics for hosiery
61   Hosiery clothing
62   Apparels, other than hosiery
63   Ready-made textile products, togs, rags
64   Footwear, gaiters and parts
73   Cast-iron, iron and steel works
84   Mechanical equipment, engines, boilers, nuclear reactors, and parts
85   Electrical equipment, audio, video and TV appliances, and parts
87   Motor cars, tractors, cycles and other transportation equipments, and parts
88   Aircrafts and spacecrafts
90   Optical, photographic and cinema equipment, measuring, medical, chirurgical, control and precision instruments, and parts