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OUTSIDERS' RESPONSE TO EUROPE 1992  
Case of Austria

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A U S T R I A

Comments by Brigitte Unger and Seev Hirsch are gratefully acknowledged. Remaining errors are mine.  
Note: 'Europe 1992' and 'EC'92' are used as proxies for the EC common market act, which has not been implemented fully until the end of 1992.

## ABSTRACT

This paper deals with the response of outsider countries to the EC'92 single-market act. The theory developed by Hirsch, Almor (1992) is tested with Austrian data. Several hypotheses on the change in the geographical orientation of firms since 1987, in particular the increase of foreign direct investment (FDI) into EC in order to overcome likely barriers to entry after completion of EC'92 is confirmed. Uncertainty concerning the EES agreement and Austrian membership in EC lead to a sharp increase of Austrian FDI in relation to domestic investment. Yet, a substantial share of total FDI flow was accounted for by the only 'true' Austrian multinational in the late 80ies. This is a state-owned company which does not represent the private sector which has been - with a few exceptions - less dynamic in FDI so far. The hypothesis concerning the knowledge-intensity of production, the type of competition (cost-related, quality-related) and firm integration was also tested but did not find strong support.

## INTRODUCTION

Austria has been member of EFTA since 1959. In 1993 the EES is likely to come into force and with it a substantial part of EC-regulations will create a new environment for Austrian firms. Recently, an application for EC-membership was submitted to the EC commission. Several studies on the likely effects of EES- and EC-membership in Austria show a slightly more favorable development of the Austrian economy on the whole in the medium run compared to an outsider position (see e.g. Breuss et al. 1988). One of the driving forces behind the decision to change direction from Geneva to Brussels was the fear that Austrian exports to EC (64,5% of total in 1990) would face cost-disadvantages due to trade barriers (administrative cost, rule-of-origin regulation etc.). Apart from this macro-integration there was a sharp increase in foreign direct investment (FDI) from 1987 onwards which was substantially induced by uncertainty of Austrian firms about the future integration strategy of the Austrian government. This is confirmed by a survey of more than 30 motives conducted in Austria in 1988, cf. Bellak et al. (1990). The following subsection provides the reader with a quick overview on Austrian outward FDI<sup>1</sup>.

## AUSTRIAN FDI: AN OVERVIEW

Outward FDI played a minor role in the internationalization process of Austrian firms up to the 1980ies, since they relied heavily on exporting. Obviously, there are two main arguments to explain the dominance of exporting over FDI. First, there was no location advantage of producing abroad. The main markets were located in Western Europe and the Austrian competitiveness (relative unit labor cost, productivity) improved during the 80ies compared to these nations. Second, and according to some authors more important, was the fact that Austrian firms did not reveal competitive advantages ('ownership-advantages') relative to their main competitors, which could have been exploited abroad.

Until the 1980ies Austria's outward FDI reached not even 40% of inward FDI, gaining momentum only in the second half of the 80ies. Between 1980 and 1990 the growth-rate was approx. 20% p.a. for outward FDI, whilst inward FDI rose about 10% p.a. (see table 1), albeit from a substantially higher level. Traditionally, inward FDI flows have been larger than outward FDI on an annual basis, with the exception of 1986 and from 1989-1991, where outward flows were substantially larger.

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Table 1

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<sup>1</sup> More detailed surveys can be found in Urban (1989), Pichl (1989), Bellak (1992).

Naturally, this "closing-the-gap" process of outward FDI compared to inward FDI lead to an almost balanced relationship of *stocks* in 1991 (see table 2). It should be mentioned, however, that outward FDI stocks on the basis of book values are substantially lower than inward FDI, still (cf. e.g. Bellak 1992).

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Table 2

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Having outlined the main developments so far we concentrate on the *regional* and the *sectoral* distribution of outward FDI<sup>2</sup>, since they represent the main issues of our hypotheses. The EC, and Germany, are the main recipient areas for Austrian FDI. America, and the US, also took a major part of Austrian FDI. Both areas accounted for more than 70% of total investment abroad in 1988. Although Austria is an EFTA-member this area has never been as important as the EC, neither in trade nor in FDI (see table 3). Hence, Austrian FDI are located to a large extent either in easy accessible markets (other important EC-member countries accounting for a share lower than 5% throughout) and / or are motivated by saving transport cost or by becoming an 'insider' firm in a huge market like the US.

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Table 3

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Tables 4 and 4a show book values of outward (inward) FDI for major destination (recipient) areas in 1985 and 1988. The substantial imbalance of Austrian FDI with all other areas is emphasized.

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Tables 4 and 4a

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We should mention that the role of Eastern Europe as a recipient of Austrian FDI (joint-ventures etc.) is not reflected in the data, since the transition process was only starting during the years covered. The type and purpose of FDI in those areas differ, however, from the "Western"-type FDI of Austrian firms and are not dealt with in the subsequent chapters of this article.

The Austrian manufacturing sector accounts for about 50% of total FDI stock (see table 5) with increasing shares. Similar to the regional distribution, the *sectoral* distribution is highly concentrated in a few industries. The bulk of FDI so far has been carried out by the resource-intensive, low-technology segments of commodity sectors (Pichl 1990), e.g. chemical, metal and construction industry.

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Table 5

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One of the problems involved with the kind of classification presented in table 5 is the high level of aggregation. FDI is to some extent determined by the characteristics of goods involved, more specifically, by the technological content of the products and production processes. Since we do not have more disaggregated data at our disposal (e.g. at the product-group level) we are not able to test any product-related hypothesis (see below hypothesis 4) on a satisfactory basis. We try to overcome these difficulties by using various classification criteria as well as different industry groupings. Most industries, however, include capital intensive high-tech segments as well as labor-intensive segments (e.g. textile industry).

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<sup>2</sup> Latest figures published by OeNB refer to 1988. Regional flow figures, which will be used to test some of our hypotheses are taken from EFTA (1990).

## THEORETICAL BACKGROUND

We use the same theoretical framework Hirsch, Almor (1992) used in their study on Israeli firms. Hence, it suffices to present the theoretical basis in short, since exactly the same hypotheses are derived.<sup>3</sup> Although we will not be able to do exactly the same empirical test we try to "copy" it as closely as possible.

### *EC's Effects on the Competitive Position of In- and Outsiders*

From the theory of relative comparative advantage (RCA) the argument that outsiders face a deterioration of their competitive cost position compared to insiders is derived. Yet, not only the outsider but also the insider position is affected by EC'92. In general (see Hirsch, Almor 1992: 4f),

the *outsider's* (non-EC) competitive position deteriorates vis a vis other insiders (EC) and remains unchanged vis a vis domestic (non-EC) manufacturers;

the *insider's* competitive position in its home market deteriorates vis a vis other insiders (EC) and remains unchanged vis a vis outsiders (non-EC). In the foreign insider market the insider's competitive position improves vis a vis foreign (EC) manufacturers, vis a vis outsiders (non-EC) and remains unchanged vis a vis other insiders (EC).

This is illustrated in table 6 which shows the *relative* improvement (+), the deterioration (-) or no effect (=) in a four country model including an outsider. *E.g.*, Austria's competitive position vis a vis Germany, Belgium and the UK deteriorates with EC'92 and remains unchanged in its home market as well as against other outsiders.<sup>4</sup> (see also Dunning 1991, Rugman, Verbeke 1991)

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Table 6

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### *The Response of Different Firms to EC'92*

Several hypotheses are derived from the fact that two groups of firms will behave differently, according to the characteristics of inputs and subsequently, outputs, i.e. "s"-<sup>5</sup> and "h"-<sup>6</sup> manufacturers.

From a comparison of their main features we conclude that s-producers will engage more heavily in FDI than h-producers in reaction to EC'92. The argument is derived as follows. The competitive position of s-producers does not depend on relative cost and hence is not affected *directly* by EC'92. Yet, their products consist of hardware and software (e.g. services), the latter affording more forward integration via FDI. Software is becoming more mobile after EC'92 is launched and hence FDI will increase.

The next subsection derives four hypotheses on the effect on the competitive position of in- and outsiders and one hypothesis on different behavior of s- and h-producers.

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<sup>3</sup> Except their hypothesis 5 saying that the ratio of FDI in s-products to h-products increases after 1987 compared to pre 1987. The reader is advised to see Hirsch, Almor (1992) for a more detailed description.

<sup>4</sup> The latter alternative is not mentioned by Hirsch, Almor (1992). Yet, it may be worth considering (theoretically) the strategy of switching from EC to other markets instead of undertaking FDI.

<sup>5</sup> From "Schumpeter products, containing a considerable amount of proprietary, firm-specific knowledge.

<sup>6</sup> From "Heckscher-Ohlin products, which are produced with technology, available at zero cost.

## HYPOTHESES

The following hypotheses suggested by Hirsch, Almor (1992) are tested with data on FDI by Austrian firms.

- H1a.  $FDI(EC)_{pre\ 87} < FDI(EC)_{post\ 87}$ ,  
where: FDI = FDI by Austrian firms  
EC = European Community markets

1987 was the year in which the Single European Act was approved by all members of the European Community. Passage of the act enabled the Community to hasten the process of approving the directives and other pieces of legislation required to translate the ideas of EC'92 into reality. We consequently expect Austrian FDI to pick up momentum after 1987. The data are normalized by inward FDI from EC.

- H1b.  $\frac{FDI(EC)_{pre\ 87}}{GFCF_{pre\ 87}} < \frac{FDI(EC)_{post\ 87}}{GFCF_{post\ 87}}$ ,  
where: GFCF = Gross Fixed Capital Formation

As an alternative to H1a we use a different normalization measure, domestic gross fixed capital formation, and predict a larger share of EC FDI after 87 than before. The rationale is seen in deteriorating export competitiveness (increasing relative cost) due to trade barriers to outsiders necessitating investment into production units inside EC.

- H2.  $FDI(US)_{pre\ 87} \leq FDI(US)_{post\ 87}$ ,  
where: US = United States market

In pre-EC'92 Europe, the existence of borders and their associated non-tariff barriers raised the cost of providing services across national boundaries. To assess the impact of intra-EC entry barriers on the mode of international transactions we compare the propensity to invest in the US and in the EC (with which Austria has had a Free Trade Area agreement since July 1972). Since the initial investment per unit of potential sales is considerably smaller in the US than in the EC, we expect the incidence of FDI in the former market to be higher. The free trade agreement as well as the proximity of EC should lead to a more balanced investment between US and EC, hence " $\leq$ ". Data are normalized by the GDP of the respective target market (US and EC).

- H3.  $\frac{FDI(US)_{pre\ 87}}{FDI(US)} < \frac{FDI(US)_{post\ 87}}{FDI(US)}$

The third hypothesis, which combines H1a and H2, allows us to examine both the effect of EC'92 and the market size effect (the European Community versus the United States). Bearing in mind the argument that EC'92 adversely affects the relative competitive position of outsiders, and recalling that conditions of access to the US market remain relatively stable, we hypothesize that following 1987 FDI in the European Community increased at a higher rate than in the United States in anticipation of EC'92.

- H4.  $FDI(s) > FDI(h)$ ,  
where: s = Schumpeter products  
h = Heckscher-Ohlin products

Hypothesis 4 follows from our discussion regarding the characteristics of h- and s-products.<sup>7</sup> Forward market integration (i.e. direct distribution through organizations controlled by the good's producer) will be higher among s-products than among h-products manufacturers. This conclusion should carry over into the international arena where we expect FDI to be more prevalent among s-products than among h-products firms.

Unfortunately, as already mentioned in the introductory section, data on FDI by product groups (SITC etc.) are not available for Austrian FDI firms. The Austrian National Bank (OeNB) publishes stock data only on the industrial level which, however, cannot be compared to other industrial classifications. Hence, the proposed classification into "s" and "h" producers is not applicable in the Austrian case. Therefore we chose other criteria to classify industries (see table 7). A second limitation is due to the fact that FDI-stock data by industry are not available after 1988 implying that there is no additional information on the response of Austrian firms after the EC-agreement of 1987.

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Table 7

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The remainder of this paper discusses the results as well as limitations of our analysis.

## RESULTS

Table 8: Hypothesis 1a

Austria	(1) FDI in EC (mUSD)	(2) EC FDI in Austria	(3) = (1)/(2) Normalized Austrian FDI in EC
1985	36	50	0,72
1986	16	160	0,10
1987	243	277	0,88
85-87	295	487	0,61
1988	108	287	0,38
1989	401	514	0,78
1990	690	364	1,91
88-90	1199	1165	1,03

Source: EFTA 1990

Comment: A single transaction (e.g. acquisition) might lead to a sharp increase in FDI, since the absolute amount of FDI is still low. The flows in 1987 were 15-times the flows of 1986, meaning that there was a sharp and immediate response to EC single-market agreement.

Hypothesis confirmed

<sup>7</sup> Almor, Hirsch (1992) also tested for a dynamic interpretation of H4 using survey data of Israeli firms,

$$\frac{FDI(s)_{pre\ 87}}{F(h)} < \frac{F(s)_{post\ 87}}{F(h)}$$

Combining H1 and H4 they expected the ratio of FDI in s-products to h-products to increase in anticipation of EC'92. Specifically, they hypothesized that the post-1987 FDI ratio of s-products to h-products should be higher than the pre-1987 ratio.

Table 8a: Hypothesis 1b

Austria	(1) FDI in EC (bnAS)	(2) gross fixed capital formation (bnAS)	(3) (1)/(2) * 100
1985	0,745	304,41	0,245
1986	0,244	324,01	0,075
1987	3,072	342,11	0,898
84-87	4,061	970,53	0,418
1988	1,334	371,17	0,359
1989	5,306	402,55	1,318
1990	7,845	435,10	1,803
88-90	14,485	1208,82	1,198

Source: EFTA 1992 (GDP), OSTZ (GFCF)

Note: GFCF includes value-added tax from investments of non-deductible-input-tax investments and investment-tax according to date of transaction.

Comment: The share of FDI in GFCF which was below one per cent until 1989 might be interpreted as representing the expectations of investors *ex-post* as to the regional market development. Data show clearly that growth-expectations of firms exist for the case EC'92 comes into effect. An increase in the ratio might occur either if GFCF, i.e. domestic investment stagnates or declines with constant FDI or if FDI increases at a faster rate. The latter has been the case in Austria, since most of FDI were (additional) complementary investments and only few existing production-units were shifted to EC and thus substituted for domestic investment. The slower increase of domestic investment might be partly explained as rationalizing investment due to a location-optimization strategy. Hypothesis 1b is further supported by two surveys (Pichl 1989, Bellak et al. 1990) which state that Austrian firms will direct their future investments mainly abroad, and thereof to EC.

Hypothesis confirmed

Table 9: Hypothesis 2

Austria	(1) GDP of US (bnUSD)	(2) FDI in US (bnUSD)	(3) (2)/(1) * 100 normalized FDI in US	(4) GDP of EC (bnUSD)	(5) FDI in EC (bnUSD)	(6) (5)/(4) * 100 normalized FDI in EC
[1983	3349,39	0,053	0,00158	2560,54	0,068	0,00265]
1984	3717,77	0,019	0,00051	2446,55	0,012	0,00049
1985	3962,22	0,025	0,00063	2528,33	0,036	0,00142
1986	4176,10	0,204	0,00488	3480,82	0,016	0,00045
1987	4452,88	0,031	0,00069	4306,66	0,243	0,00564
84-87	16308,97	0,279	0,00171	12762,36	0,307	0,0024

Source: EFTA 1990, OeNB (FDI)  
OECD, National Accounts (GDP)



Note: GDP at current prices and current exchange rates

Comment: Normalized FDI in US were slightly lower than in EC pre87. The result is even confirmed taking one more year into account (1983). (EC 0,00244 > US 0,00168) Although the value for EC is larger than for the US, the difference is quite small, a case included in our hypothesis.

Hypothesis confirmed

Table 10: Hypothesis 3

Austria	(1) FDI in EC (mUSD)	(2) FDI in US (mUSD)	(3) (1)/(2)
1985	36	25	1,440
1986	16	204	0,078
1987	243	31	7,839
85-87	295	260	1,13
1988	108	34	3,176
1989	401	100	4,010
1990	690	150	4,600
88-90	1199	284	4,22

Source: EFTA 1992 (FDI)

Comment: There is a clear trend towards a stronger engagement in the EC compared to US after 1987 (1.13 pre-87 v. 4.22 post-87). At that time, Austrian firms had no incentive from the US market comparable to EC'92-project like NAFTA'92 recently would have been.

Hypothesis confirmed

Table 11: Hypothesis 4 - FDI stock and employment of manufacturing industries in 1988

Industries	(1) FDI stock 1988 (mnAS)	(2) employees in 1988		
		total	white collar	share of white collar
Metals, Materials (M)	3426	193794	59626	30,77
Electro(nics) (E)	207	72143	28781	39,89
Chemical and allied products (C)	3471	61905	23350	37,72
Wood, Paper (P)	711	46536	10933	23,49
Textiles, Leather, Clothing (T)	291	68914	15839	22,98
Food (F)	355	42934	14905	34,72
Materials, Ceramics, Construction (A)	1252	62420	14524	23,27

Source: OeNB 2/1991

Note: For classification criteria see table 7. Results are subject to the classification by the author. Other classifications might also be chosen and would certainly change results significantly. There are no data on the more suitable criteria to classify s- and h-products, R&D relative to sales and percentage share of technical personnel which was used by Hirsch, Almor (1992).

Comment: The Almor, Hirsch hypothesis on the stronger pressure to internationalize in s-product industries is tested on the basis of white-collar share in total workforce (see table 11). We used the average share of white collar employees in total (30.4%) in order to classify industries into h- and s-producers. According to this classification, the value of s-industries' FDI-stock is more than 3-times the value for h-products. Since the share of the metals, materials sector is only slightly higher (30.77%) than average, it would be justified to classify it either as h- or as s-producers. These considerations lead to a rejection of hypothesis 4 in the former and a confirmation in the latter case.

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Table 12

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First, similar classifications presented in sections C and D of table 12 lead to a similar conclusion. Second, it is in line with the results of an empirical survey of Pichl (1989) showing a dominance of h-producers in FDI in 1988. It should be emphasized that the metals, materials sector (see table 11) consists of a relatively large "commodity"-sector as well as important high-tech segments. Thus, the classification of these sectors as h-producers would be more realistic and is also justified e.g. by results of Schulmeister's analysis (1990) of Austrian exports (see table 12, section E).

Hypothesis confirmed under restrictions mentioned above

#### CONCLUDING REMARKS

The hypotheses find additional support from 17 in-depth case studies of Austrian firms with FDI (see Bellak et al. 1989). In particular, many firms with high-tech, innovative s-products are already 'individual' EC-members. One firm, e.g. stated that it is fully integrated into EC already in 1988 (*ibid.* 111). This 'micro-based' integration has been further supported by the 'macro-based' EC-application of Austria in July 1989. Hence, the 17 firms will face only minor problems in the course of Austria's integration, mainly fine-tuning their logistics and subsidiary locations. The majority of the interviewed firms takes part in the dynamics of the EC single-market project and has already gained a substantial market position (*ibid.* 20). Many of them are niche-suppliers, nearly all of them having a monopolistic advantage in some products. One should, however, emphasize that this is still the exception rather than the rule (see introduction).

A quick comparison to the results of Hirsch, Almor (1992) concerning the regional strategies of firms reveals that there has been a similar development of FDI in Israel and Austria. Yet, the free-trade agreement with US in the former country and with EC in the latter country probably lead to the greater importance of the respective markets for either country. As to the product(ion) related hypothesis (4) no comparison is possible.

No work has been done on the product level concerning Austrian FDI so far. Hence, in the Austrian context, future research should be directed to the second group of hypotheses, i.e. how different kinds of firms react to policy measures or announcements.

Again, we point to the *caveat* relating to the product-related hypothesis (4) emphasized in the introductory section.

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## TABLES

Table 1: Outward and Inward FDI-flows and Balance 1960-1991 (mnAS)

Year	Outward Flows			Inward Flows	Balance
	New investment	divestment	net		
1960				232	-232,00
1965	169	15	154	780	-626,00
1966	93	11	82	893	-811,00
1967	82	6	76	627	-551,00
1968	454	46	408	1126	-718,00
1969	453	168	285	1308	-1.023,00
1970	451	160	291	2458	-2.167,00
1971	1039	135	904	2013	-1.109,00
1972	716	74	642	1786	-1.144,00
1973	892	192	700	2071	-1.371,00
1974	952	533	419	3210	-2.791,00
1975	568	49	519	1742	-1.223,00
1976	1100	57	1043	1933	-890,00
1977	1562	165	1397	2050	-653,00
1978	1444	225	1219	2295	-1.076,00
1979	1470	346	1124	2558	-1.434,00
1980	1398	96	1302	3109	-1.807,00
1981	3356	70	3286	5068	-1.782,00
1982	3124	560	2564	3518	-954,00
1983	3515	166	3349	3948	-599,00
1984	2652	1306	1346	2334	-988,00
1985	2349	1340	1009	3469	-2.460,00
1986	4958	440	4518	2777	1.741,00
1987	4979	1343	3636	5093	-1.457,00
1988	3796	223	3574	5486	-1.912,00
1989	12313	434	11879	7384	4.495,00
1990	19949	1695	18254	7035	11.219,00
1991	18418	3418	15000	3024	11.976,00

Source: Urban 1989, p. 77; 1989/1990: OeNB Mitteilungen des Direktoriums der OeNB, 1/1989, 1/1990 (non-revised data)

Table 2: Outward and Inward Stocks and Balance (accumulated flows) 1960-1991 (mnAS)

Year	Outward Stocks	Inward Stocks	Share of outward on inward stocks	Balance
1960		232	0,00	-232,00
1961	18	579	0,03	-561,00
1962	16	1059	0,02	-1.043,00
1963	81	1536	0,05	-1.455,00
1964	152	1971	0,08	-1.819,00
1965	306	2751	0,11	-2.445,00
1966	388	3644	0,11	-3.256,00
1967	464	4271	0,11	-3.807,00
1968	872	5397	0,16	-4.525,00
1969	1157	6705	0,17	-5.548,00
1970	1448	9163	0,16	-7.715,00
1971	2352	11176	0,21	-8.824,00
1972	2994	12962	0,23	-9.968,00
1973	3694	15033	0,25	-11.339,00
1974	4113	18243	0,23	-14.130,00
1975	4632	19948	0,23	-15.316,00
1976	5675	21917	0,26	-16.242,00
1977	7072	23967	0,30	-16.895,00
1978	8291	26262	0,32	-17.971,00
1979	9415	28820	0,33	-19.405,00
1980	10717	31929	0,34	-21.212,00
1981	14003	36998	0,38	-22.995,00
1982	16567	40516	0,41	-23.949,00
1983	19916	44464	0,45	-24.548,00
1984	21262	46798	0,45	-25.536,00
1985	22271	50267	0,44	-27.996,00
1986	26789	53044	0,51	-26.255,00
1987	30425	58136	0,52	-27.711,00
1988	33999	63622	0,53	-29.623,00
1989	45878	71006	0,65	-25.128,00
1990	64132	78041	0,82	-13.909,00
1991	79132	81065	0,97	-1933,00

Source: calculation based on Balance of Payments

Table 3: Regional Distribution of Outward Stock (book values) 1984 - 1988 (mnAS)

Region	1984	1985	1986	1987	1988
<b>Economic Bloc</b>					
EC	4478	4825	4392	6254	7194
EFTA	1530	1369	1758	2147	2322
EASTERN EUROPE	92	98	83	157	360
OPEC	182	182	158	117	133
OECD	8038	8524	7674	9873	11640
<b>SELECTED COUNTRIES</b>					
Germany	2488	2591	2721	4062	4411
USA	1833	2194	1402	1356	1820
Switzerland + FL	1485	1344	1736	2126	2295
Netherlands	337	n.a.	n.a.	n.a.	2826
Luxembourg	167	n.a.	n.a.	n.a.	494
UK	738	n.a.	n.a.	n.a.	358
Italy	218	n.a.	n.a.	n.a.	297
France	117	n.a.	n.a.	n.a.	269
Canada	114	n.a.	n.a.	n.a.	251
Hungary	90	n.a.	n.a.	n.a.	222
Belgium	208	n.a.	n.a.	n.a.	214
<b>CONTINENTS</b>					
Europe	6251	6458	6414	8731	10064
America	2039	2383	1548	1584	2269
Asia	435	404	353	268	296
Africa	63	33	29	14	16
Australia + Ozean.	22	44	34	31	49
<b>Total</b>	<b>8811</b>	<b>9322</b>	<b>8379</b>	<b>10628</b>	<b>12694</b>

Source: OeNB 5/87; 5/89; 2/91.

Table 4: "Cross country" Stocks 1985 (mnAS, Nominal Capital)

IN... FROM...	Austria	EC	EFTA	OECD	Europe	America	Asia
Austria	-	4825	1369	8524	6458	2383	404
EC	18940	-	-	-	-	-	-
EFTA	13266	-	-	-	-	-	-
OECD	36851	-	-	-	-	-	-
Europe	33224	-	-	-	-	-	-
America	5851	-	-	-	-	-	-
Asia	249	-	-	-	-	-	-

Source: OeNB 5/89; 1988.

Table 4a: "Cross country" Stocks 1988 (mnAS, Nominal Capital)

IN... FROM...	Austria	EC	EFTA	OECD	Europe	America	Asia
Austria	-	7194	2322	11640	10064	2269	296
EC	27621	-	-	-	-	-	-
EFTA	11705	-	-	-	-	-	-
OECD	43669	-	-	-	-	-	-
Europe*)	-	-	-	-	-	-	-
America*)	-	-	-	-	-	-	-
Asia*)	-	-	-	-	-	-	-

Source: OeNB 2/1991; 3/1991.

\*) no longer published

Table 5: Sectoral Distribution of Austrian FDI Stocks 1985 - 1988 (mnAS and percentage on total)

Industry	1985		1986		1987		1988	
		%		%		%		%
Textiles, Leather, Clothing	230	1,2	264	1,6	294	2,0	291	1,7
Chemical and allied products	2296	12,3	1940	11,6	2941	19,6	3471	20,3
Metals and Vehicles	5099	27,3	3355	20,1	2843	18,9	3426	20,1
Electro	161	0,9	179	1,1	157	1,0	207	1,2
Paper, Wood	999	5,4	1038	6,2	629	4,2	711	4,2
Food	291	1,6	296	1,8	352	2,3	355	2,1
Materials, Ceramics, Construction	352	1,9	339	2,0	1173	7,8	1252	7,3
Trade	753	4,0	769	4,6	865	5,8	1063	6,2
Energy, Transport	61	0,3	67	0,4	-3902	-	-4376	-
Tourism	12	0,06	17	0,1	45	0,3	62	0,4
Small Business	84	0,5	91	0,5	136	0,9	190	1,1
Banking, Insurance and other financial sector	5068	27,2	5711	34,2	5146	34,3	5710	33,4
Total	18646		16714		15015		17085	

Source: OeNB 5/89; 2/91.



Table 6: Conceptual Framework

Competitive Position of ...	Relative to ...	Target Market		
		A	B	C
Insider A	B	-	+	=
	C	-	=	+
	R	=	+	+
Insider B	A	+	-	=
	C	=	-	+
	R	+	=	+
Insider C	A	+	=	-
	B	=	+	-
	R	+	+	=
Outsider R	A	=	-	-
	B	-	=	-
	C	-	-	=

Table 7: Alternative Classification Criteria

Criteria	Characteristics	Industries	Source of Criteria
A Competitive pressure from low-cost countries	high	Construction Materials, Textiles (except machinery)	New Business 10/92, p. 88f.
	increasing	Chemicals, Wood processing automotive supplier industries machinery (e.p. NICs)	
	low	Iron & Steel; (due to widespread FDI into EC) Food (due to barriers to trade in agriculture) Electro(nics) (in capital-intensive segments) Pulp & Paper	
B Sensitive Sectors in EFTA countries	Sensitive Industries: (list see appendix; are those with four or more product groups (3-digit) 1. High capital and R&D contents 2. high capital but low R&D countries 3. high skilled labor contents 4. high labor contents 5. low labor and capital contents	Chemicals Machinery Food Textile	EFTA occasional Paper Nr. 38, p. 27
C Value-added	"Commodity" Sector	Chemicals Mining Metals Textile Wood Food	Pichl 1989, p. 427
	Technology intensive processing	Machinery Automotive Electro(nics) Pulp und Paper (?)	
D Product life-cycle	Innovative	Metal, Materials Automotive Electro (nics) Chemicals	Bellak 1992, p. 42
	Maturing	Textile Wood, Paper Ceramics, Construction Food	
E Industries	Human Capital-	chemical, metal, machinery	Schulmeister 1990, p. 664
	Research-	electro(nics), chemicals	
	Capital-	automotive, paper, textile	
	labor-	textile	
	Scale-	chemicals, textiles, paper	
	Raw Material-	ceramics, construction	
	Energy-	paper	
Technology-	paper, electro(nics), machinery Note: Industries were classified by the author, C.B.		
F Producer characteristics	h-products (no firm competitive advantage, technology available) share of white collar employees	textiles paper materials	Almor, Hirsch 1992, p. 10
	s-products (significant element of proprietary knowledge)	metal, materials chemicals food electro(nics)	

Table 12: Hypothesis 4

Nr.	Industry Classification*)	(1) FDI stock 1988 (mnAS)
A	High (A, M, T)	4969
	Increasing (C, P)	4182
	Low (M, F, E, P)	4699
B	Sensitive (C, M, F, T)	5369
C	Commodity (C, A, M, T, F)	8795
	Technology intensive (M, E, P)	4344
D	Innovative (M, E, C)	7104
	Maturing (T, P, A, F)	2609
E	Human Capital (C, M)	6897
	Research (E, C)	3678
	Capital (P, T)	1002
	Labor (T)	291
	Scale (C, T, P)	4473
	Raw Material (A)	1252
	Energy (P)	711
	Technology (P, E, M)	4344
F	h-products (P, T, A) ( < 30% share of white collar empl.)	2254
	s-products (M, E, C, F) ( > 30% share of white collar empl.)	7459

Note: capital letters refer to industries of table 11

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