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– Striking Peculiarities, Unfounded Fears, and Neglected Issues

by

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German Direct Investment in Latin America

– Striking Peculiarities, Unfounded Fears, and Neglected Issues

by

Peter Nunnenkamp

May 1998

Abstract

Foreign direct investment (FDI) of Germany in Latin America reveals various peculiarities that may shape future investment relations. However, two major concerns are largely unfounded:

- In contrast to widespread fears in Germany, FDI outflows are highly unlikely to have added to labor market problems.
- Host country concerns that the Eastern enlargement of the EU may divert German FDI away from Latin America seem to be unjustified.

German investors have responded relatively weakly to new investment opportunities in Latin America. Some of the traditional features of German FDI in this region, notably the predominant orientation towards large local markets, may work against closer investment relations in the era of globalization. Much depends on whether Latin American host countries succeed in improving international competitiveness in industries in which German FDI is concentrated.

JEL classification: F21

I. INTRODUCTION

Foreign direct investment (FDI) is a heavily debated issue in both Germany and Latin America. In Germany, concerns are that the huge discrepancy between high and rising FDI outflows and minor FDI inflows indicates deficient investment conditions and adds to unemployment problems.[1] Especially German FDI in developing regions is widely perceived to impair the employment and wage prospects of low-skilled workers in Germany. In Latin America, concerns are that fiercer worldwide competition for FDI may render it difficult to sustain the recent boom of capital inflows into the region. The emergence of transition economies in Asia (notably China) and Central and Eastern Europe on international capital markets may divert the attention of foreign investors away from more traditional host countries of FDI in Latin America. One may suspect that particularly German FDI is subject to FDI diversion, taking into account the attractions of investing in neighboring transition economies.

On closer inspection, these concerns have little substance. As will be shown below, relocation of labor intensive production from Germany to lower wage locations by means of FDI has played a minor role. Moreover, adjustment pressure on the German economy resulting from FDI in Latin America has remained particularly weak. At the same time, the empirical evidence does not

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1 For recent analyses of FDI patterns and investment conditions in Germany, see, e.g., Nunnenkamp (1996), Klodt and Maurer (1996), and Jost (1997).

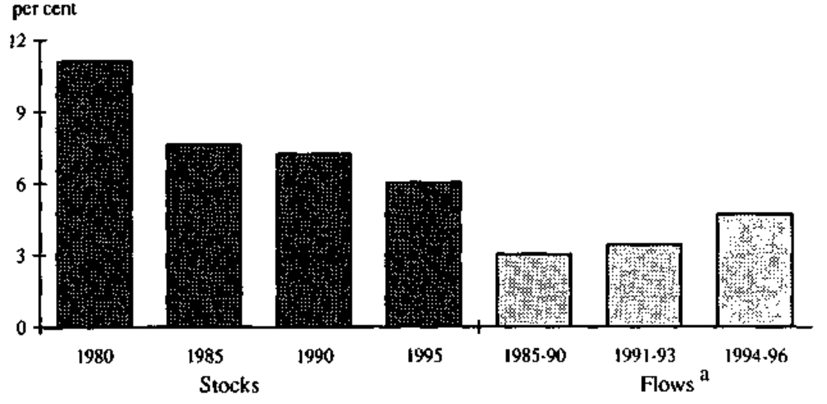
support the notion of significant FDI diversion to the detriment of Latin America. Yet, German FDI patterns in Latin America reveal striking peculiarities, compared with FDI from other sources. German investors seem to have responded less enthusiastically to new investment opportunities in Latin America. Some of the traditional features of German FDI in this region may work against closer investment relations in the era of globalization.

II. MAJOR TRENDS IN GERMAN FDI IN DEVELOPING REGIONS

1. The Position of Latin America and the Caribbean

Depending on perspective, investment relations between Germany and Latin America (including the Caribbean) reveal a strikingly different picture. From Latin America's point of view, inward FDI from Germany plays a modest role. Germany contributed less than 5 per cent to total FDI flows to Latin America since the mid-1980s, and Germany's share in total FDI stocks held in Latin America was only slightly higher (Figure 1). Comparing the trend in FDI stocks, Germany was outperformed by almost all other major investor countries in this region (Figure 2). For instance, FDI stocks held by the United States and Japan were four and 3.5 times higher in 1994 than in 1985, compared with an increase in German FDI stocks of less than 80 per cent during the same period. This difference is mainly because German FDI stocks in Latin America stagnated until

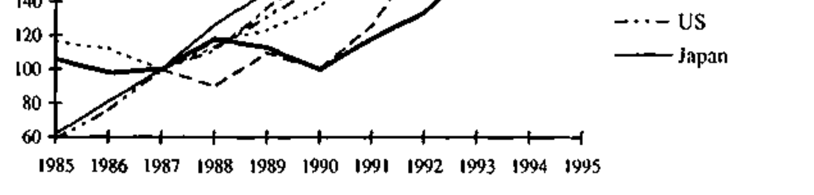
Figure 1 — Share of Germany in Overall FDI in Latin America, 1980–1996



[a]Period average.

Source: Deutsche Bundesbank (a; b); OECD (1996); UNCTAD (1997).

Figure 2 — Trends in FDI Stocks Held by Major Investor Countries in Latin America[a], 1985–1995



[a]Index based on FDI stocks in national currency, except Japan for which FDI stocks are reported in US$. — [b]No data available for 1985 and 1986. — [c]Excluding Mexico.

Source: Deutsche Bundesbank (a); OECD (1996).

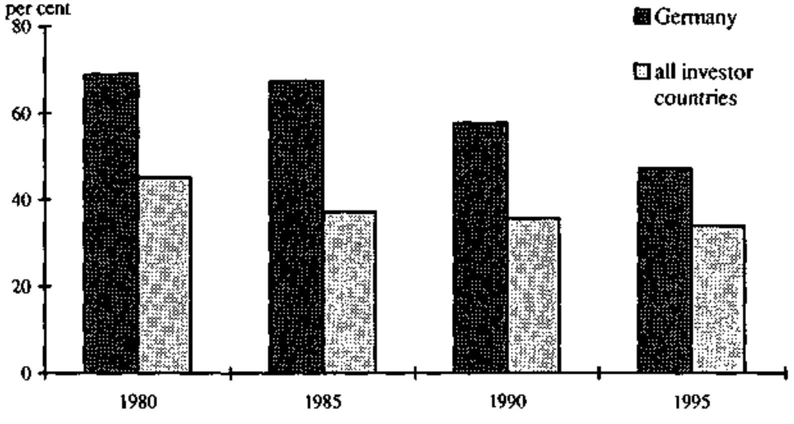
1990. As it seems, German investors were lagging behind other foreign investors in responding to the improving investment climate in Latin America. German investors recovered lost ground in the 1990s, however, when they reported the steepest increase in FDI stocks.

By contrast, from the German perspective, FDI appears to be biased heavily towards Latin America if German FDI outside the OECD area is considered to be the yardstick (for an earlier analysis, see Nunnenkamp 1991). Latin American host countries accounted for about two thirds of FDI stocks held by Germany in all developing countries in the 1980s (Figure 3).[2] This share declined to somewhat less than 50 per cent until 1995. Nonetheless, it remained substantially above Latin America's share in FDI stocks held by all investor countries in all developing host countries.

How to reconcile the bias of German investors towards Latin America with their minor role in overall FDI in this region? Relatively low FDI of Germany in developing countries as a whole provides the explanation. Less than 10 per cent of total FDI outflows of Germany were directed to non-OECD host countries (including Mexico) in 1985–1994. The corresponding share was almost three times as large in the case of Japanese FDI outflows, and almost four times as

2 In the following, Central and Eastern Europe is considered to be part of the developing world.

Figure 3 — Share of Latin America in FDI Stocks Held by Germany and All Investor Countries in Developing Regions[a], 1980–1995



[a]Including transition economies in Central and Eastern Europe.

Source: Deutsche Bundesbank (a); UNCTAD (1997).

large in the case of *US FDI* outflows (Gundlach and Nunnenkamp 1997: Table 3). Similar discrepancies prevailed with regard to outward FDI stocks in 1990. Developing countries as a whole accounted for 10 per cent of German FDI stocks, 25 per cent of US FDI stocks and 32 per cent of Japanese FDI stocks (OECD 1996). Only recently, the balance of German FDI shifted somewhat towards developing countries. Not surprisingly, this shift was minor with respect to FDI stocks (to 13 per cent in 1995), given that FDI stocks tend to be relatively stable. In terms of German FDI flows, developing countries doubled their share to an annual average of about 20 per cent in 1993–1996 (Deutsche Bundesbank c).

These trends provide some tentative clues related to the concerns mentioned in the introduction. First, the extremely strong concentration of German FDI in similarly advanced OECD countries casts doubts on the widely held belief that FDI has contributed significantly to labor market problems in Germany. If relocation of production by means of FDI in lower cost locations had a major labor market impact, Germany should suffer from less severe labor market problems than the United States and Japan, for which FDI in developing countries figured more prominently. A comparison of labor market outcomes in major industrial countries reveals exactly the opposite pattern (Gundlach and Nunnenkamp 1997). The question that remains is whether the recent rise of German FDI in developing countries in general, and in Latin America in particular, is likely to have more serious labor market implications. This issue is taken up in Section IV again. Second, the traditional bias of German investors towards Latin America seems to justify Latin American concerns about FDI diversion, even though the potential costs cannot be excessive because of Germany's minor contribution to overall FDI in this region in the past. However, the subsequent section shows that convincing evidence for significant diversion of German FDI to the detriment of Latin America does not exist.

2. Major Competitors of Latin America

Any discussion of FDI diversion suffers from conceptual limitations. In contrast to trade diversion resulting from discriminatory trade policies, the notion of FDI diversion lacks analytical foundation. Germany does not apply economic policies that discriminate explicitly between FDI in different host regions, nor does the EU. In other words, there is no direct link between economic policy in Germany on the one hand, and the traditional bias of German investors towards Latin America and their conceivable reorientation towards other developing regions on the other hand. Yet, economic policy may influence locational choices of investors in an indirect way. Most importantly perhaps, Latin America may face a competitive disadvantage in attracting German FDI after transition economies in Central and Eastern Europe became closely associated with the EU. Especially the prospective EU members among transition economies will benefit from unrestricted access to EU markets. This provides a major stimulus to German FDI in these economies. It is in this sense that the notion of FDI diversion is used in the following. Another problem almost impossible to resolve is to determine the empirical significance of FDI diversion. The counterfactual is unknown, i.e., it is open to question what would have happened to German FDI in Latin America if Central and Eastern Europe had not emerged as a new competitor. Moreover, it cannot be identified whether the effects on Latin America would have been different if Central and Eastern Europe had not been offered preferential access to EU markets.

These constraints notwithstanding, various observations suggest that FDI diversion to the detriment of Latin America has played a minor role (see also Nunnenkamp 1997b). Table 1 reveals that German FDI in developing regions is anything else but a zero-sum game. All developing regions received increasing

Table 1 — Net Flows of German FDI to Developing Regions, 1985–1996 (million DM)

	1985–88[a]	1989–92[a]	1993–96[a]
Latin America	363	829	1825
Africa	–78	165	231
Asia	522	585	2261
Central and Eastern Europe	39	901	3691
[a]Period average.			

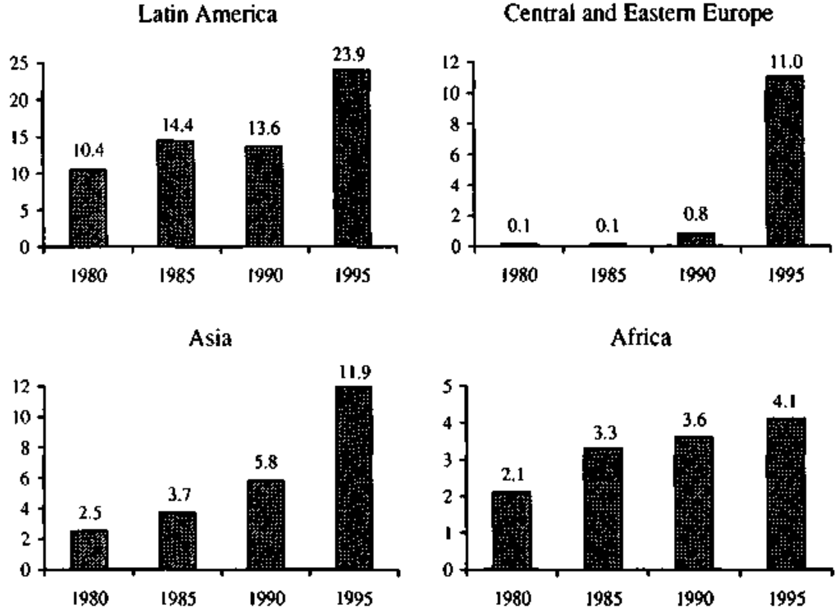
Source: Deutsche Bundesbank (b); OECD (1996).

FDI inflows from Germany since the mid-1980s. Hence, new investment opportunities in Central and Eastern Europe are more likely to have added to German FDI, rather than having diverted German FDI away from other locations. The relatively modest increase in German FDI flows to Latin America (by a factor of 2.2, comparing period averages of 1989–1992 and 1993–1996) is not inconsistent with this view. If this modest increase were attributed to FDI diversion, it would be difficult to explain why not only Central and Eastern Europe, but also Asia received FDI inflows from Germany in 1993–1996 in the order of four times the inflows of 1989–1992. FDI diversion should have affected Latin America *and* Asia, considering that both regions were confronted with new and somehow privileged competitors for German FDI.

Likewise, the development of German FDI stocks in Latin America and in competing developing regions does not point to significant FDI diversion. Valuation effects may have a considerable impact on stock data. This applies especially to Latin America, where German investors were strongly engaged in the 1970s and 1980s already. Yet it is striking that FDI stocks held in Latin America were more or less stagnant in the 1980s, i.e., *before* Central and Eastern Europe competed for German FDI (Figure 4). Moreover, it was exactly when Central and Eastern Europe absorbed soaring FDI from Germany that German FDI stocks in Latin America rose as well. In both regions, FDI stocks increased by about DM 10 billion between 1990 and 1995 (compared with an increase of DM 6 billion in Asia).

All in all, past trends suggest that German FDI in Latin America was mainly determined by investors' perceptions of investment conditions in this particular region, rather than by FDI developments in other regions. Structural characteristics of German FDI in Latin America may shed more light on investors' perceptions and, thus, on the determinants of German FDI in Latin America.

Figure 4 — German FDI Stocks in Developing Regions, 1980–1995 (billion DM)



Source: Deutsche Bundesbank (a).

III. STRUCTURE OF GERMAN FDI IN LATIN AMERICA

1. Major Host Countries

The regional bias of German FDI in non-OECD countries towards Latin America went along with a strong concentration of FDI within this region.[3] Argentina, Brazil and Mexico together accounted for 90 per cent of German FDI stocks in

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3 We mainly refer to FDI stocks in this section. Particularly for smaller host countries, FDI inflows are volatile and often not disclosed for reasons of confidentiality.

Latin America in 1985 and 1995 (Table 2). In comparison, about three quarters of FDI stocks of all foreign investors in Latin America were located in these three economies.

Brazil was the most important host country for German and all foreign investors. However, the focus on Brazil was exceptionally strong in the case of German FDI. Brazil accounted for four times as much of German FDI than the next important host country (Mexico) in 1995, although FDI stocks had shifted somewhat from Brazil to Mexico since 1985.[4] Even in per-capita terms, German FDI stocks in 1995 were highest in Brazil among the countries considered in Table 2, followed by Argentina, Chile and Mexico. By contrast, relatively small countries (Chile and Costa Rica) ranked first and second in terms of per-capita FDI stocks of all investors, while Brazil ranked only fifth.

According to flow data, locational choices of German investors continued to be biased heavily towards Brazil in the most recent past. Brazil received 61 per cent of accumulated FDI flows from Germany to Latin America, excluding Cayman Islands, in 1993–1996 (Deutsche Bundesbank c). In contrast to Table 2, flow data do not point to a reorientation of German investors towards Mexico. Rather, the share of Mexico in accumulated FDI flows to Latin America, excluding Cayman Islands, was down to 3.2 per cent in 1993–1996.

4 FDI stocks of all foreign investors in Brazil were just 1.5 times their FDI stocks in Mexico.

Table 2 — Host Country Structure of German FDI Stocks in Latin America and the Caribbean,[a] 1985 and 1995 (per cent)

	1985	1995[b]		memorandum: FDI stocks of all investors 1985	1995[b]	
Mercosur	82.3	75.0		50.1	50.9	
Argentina	13.4	11.0	(42)	9.9	10.0	(710)
Brazil	68.4	63.4	(53)	38.6	39.9	(621)
Paraguay	0.1	0.1	(3)	0.4	0.4	(228)
Uruguay	0.4	0.4	(18)	1.2	0.6	(453)
Andean Group	5.1	4.2		9.8	10.9	
Bolivia	0.1	0.0	(0.4)	0.9	0.6	(210)
Colombia	2.4	2.9	(10)	3.4	4.0	(267)
Ecuador	0.6	0.3	(3)	1.5	1.3	(276)
Peru	0.6[c]	0.2	(1.2)	1.7	2.2	(230)
Venezuela	1.4	0.8	(5)	2.3	2.8	(321)
Central American Common Market[d]	1.6	0.9		3.6	2.4	
Costa Rica	0.3	0.1	(6)	1.4	1.1	(821)
El Salvador	0.4	0.3	(8)	0.3	0.1	(52)
Guatemala	0.9	0.4	(5)	1.6	0.9	(207)
Honduras	..	0.0	(0.5)	0.3	0.2	(101)
Chile	1.2	2.9	(28)	3.5	6.3	(1095)
Mexico	8.2	15.4	(22)	28.3	25.8	(697)
Other[e]	1.6[f]	1.6		4.7	3.7	
Memorandum (bill.US$):						
– sum of above countries	4.9	13.3		66.4	247.5	
– offshore financial centres[g]	1.0[h]	3.3		10.4	30.5	

[a]Excluding the subsequent offshore financial centres: Bahamas, Bermuda, Cayman Islands, Netherlands Antilles and Panama. — [b]In parentheses: US$ per capita of population in 1995. — [c]Estimate. — [d]Excluding Nicaragua. — [e]Including Nicaragua. — [f]Including Honduras and Bahamas. — [g]As listed in note a. — [h]Excluding Bahamas.

Source: Deutsche Bundesbank (a); UNCTAD (1997).

Apart from the three principal recipients of German FDI in Latin America, only Chile and Colombia accounted for a notable share in German FDI stocks of about 3 per cent in 1995. However, Germany's engagement in Colombia remained rather weak when measured by per-capita FDI stocks. In Chile, German investors continued to be underrepresented if Chile's share in FDI stocks of all foreign investors is taken as a yardstick. All remaining Latin American economies accounted for less than 1 per cent of German FDI in 1995; and for almost all of them the share declined between 1985 and 1995, notwithstanding the concurrent trend towards market integration on a subregional level. During this period, regional integration in Latin America does not appear to have improved the chances of relatively small host economies to attract German FDI (see also Box 1).

2. Sectoral Characteristics

German FDI in Latin America is highly concentrated not only in few host countries, but also in few economic activities. While European FDI in general "has tended to specialize in manufacturing" (IADB and IRELA 1996: 18), the focus on manufacturing is particularly strong for German FDI (Table 3):

- Though having declined somewhat since 1985, manufacturing still accounted for two thirds of overall German FDI stocks in Latin America in 1995.
- The focus of German investors on manufacturing was even stronger in the three largest Latin American host countries.

Box 1 — Regional Integration in Latin America: A Stimulus to German FDI?

Regional integration is widely believed to provide a stimulus to FDI in Latin America. For example, IADB and IRELA (1996: 57) argue that "firms are increasingly tending to adopt subregional strategies – often as part of a global approach to their business – to take advantage of larger, more integrated and growing markets". An empirical test of this proposition with respect to German FDI is difficult for two reasons. First, almost all Latin American countries are members of one or more regional integration schemes, or at least associated with such schemes (as Chile with Mercosur). Second, regional integration went along with domestic economic policy reforms in various countries. Hence, it is almost impossible to decide whether FDI reacted to improving investment conditions on the national level, or to market integration on the regional level. In any case, the relatively modest increase in German FDI flows to Latin America, as compared with Asia (see Section II.2), suggests that *institutionalized* regionalism has been less important than market-driven regionalization, taking into account that institutionalized regionalism was largely absent in Asia.

Yet, German FDI trends in Latin American integration schemes may offer some interesting insights, especially as concerns the locational attractiveness of relatively small and less advanced member countries. The large country-bias of German investors is most pronounced in *Mercosur*. The combined share of Paraguay and Uruguay in German FDI stocks held in all four Mercosur countries increased only marginally and remained below 1 per cent until 1995. In terms of per-capita FDI stocks, however, the two smaller Mercosur members reveal striking differences. Per-capita FDI stock was fairly high in Uruguay, which was characterized by a relatively high level *and* growth of per-capita income.[1] By this measure, Uruguay proved to be most attractive for German FDI among all Latin American economies with a population of less than 12 million listed in Table 2 in the text. Per-capita FDI stock in less advanced and slow-growing Paraguay was only a fraction of per-capita FDI stock in Uruguay.

Likewise, German FDI in the *Andean Group* was concentrated in the largest member country, i.e., Colombia. In 1995, Colombia accounted for more than two thirds of German FDI stocks located in the Andean Group (compared with 37 per cent of FDI stocks of all foreign investors). At the same time, both Bolivia and Peru hosted just marginal German FDI stocks, although these two economies differed remarkably with respect to size, income level and economic growth.

The pattern of German FDI in the *Central American Common Market* (CACM) is rather puzzling. The experience of Honduras indicates that regional integration did not encourage German FDI in relatively small, less advanced and slow-growing member countries. Surprisingly, however, German investors favored El Salvador (measured by per-capita FDI stocks in 1995) over the largest member country (Guatemala) *and* the most advanced economy (Costa Rica). This contrasts sharply with the distribution of FDI stocks of all foreign investors within CACM.

All in all, the impact of regional integration in Latin America on the distribution of German FDI appears to be small. Additional German FDI, if any, tended to be directed to the traditionally preferred host countries. With few exceptions, these countries consisted of the largest and relatively advanced members of regional integration schemes. This implies that regional integration is no promising means

[1] We refer to per-capita income in US$ in 1995 and to average annual growth in 1985–1995 (World Bank 1997).

for small and less advanced economies such as Bolivia, Honduras and Paraguay to improve their attractiveness for German FDI.

- The shift from manufacturing towards other sectors was considerably less pronounced for German FDI stocks than for FDI stocks of all foreign investors. For instance, Mexico's tertiary sector accounted for 45 per cent of total FDI stocks from all sources in 1995 (IADB and IRELA 1996: Statistical Annex, Table 55), compared with less than 10 per cent of German FDI stocks.

Table 3 — Sector and Industry Structure of German FDI Stocks in Latin America,[a] 1985 and 1995

	Manufacturing (per cent of all sectors)		Major industries (per cent of manufacturing)							
			Chemicals		Electrical equipment		Machinery		Transport equipment	
	1985	1995	1985	1995	1985	1995	1985	1995	1985	1995
Latin America	71.8	66.6	29.4	29.8	15.4	15.2	10.8	10.7	25.6	27.5
Argentina	80.5 (61.2)	75.7 (53.1)[b]	35.8 (22.4)	37.8 (24.3)[b]	14.8	12.4	7.4	0.7	23.6 (21.5)	28.3 (29.6)[b]
Brazil	91.3 (74.7)	86.2 (58.1)[c]	22.5 (23.7)	21.0 (24.9)[c]	16.0	17.4	12.9	15.8	28.4 (18.5)	27.5 (19.1)[c]
Mexico	88.1 (77.8)	90.0 (53.5)	48.9	36.1	14.9	10.9	3.8	0.9	20.3	40.1

[a]In parentheses: corresponding share in FDI stocks of all investor countries, where available. — [b]1992. — [c]1993.

Source: Deutsche Bundesbank (a); IADB and IRELA (1996: Tables 49, 51 and 55).

Furthermore, German FDI is concentrated in few manufacturing industries. The four industries listed in Table 3 represented more than 80 per cent of manufacturing FDI stocks in Latin America in 1985 and 1995. In the case of Mexico, the combined share of chemicals and transport equipment increased from 69 per cent in 1985 to 76 per cent in 1995. In Argentina and Brazil, the focus of German investors on these two industries was persistently stronger than that of all other foreign investors.

The less diversified nature of German FDI with regard to host countries, economic sectors and manufacturing industries suggests that the strategy of German firms in Latin America differed from that of firms from other investor countries. Another issue discussed in the subsequent section concerns the implications of the behavior of German investors for the German economy on the one hand, and for Latin American host countries on the other hand.

IV. THE STRATEGY OF GERMAN FIRMS IN LATIN AMERICA

1. Different Internationalization Strategies

Before discussing major determinants of German FDI in Latin America, it is important to note that German firms did not prefer FDI as a mode of internationalization. While exporting dominated over FDI for all major investor countries, this dominance was most pronounced for Germany (Table 4). Comparing internationalization strategies on a worldwide scale, the FDI to exports-ratio was about 2-3 times higher for France, Japan, the United Kingdom

Table 4 — FDI to Exports-Ratio of Major Investor Countries,[a] 1985–1995 (per cent)

	Latin America	World
Germany	8.4	4.8
France	3.8[b]	9.6
Japan	42.5[b]	8.2
United Kingdom	67.3[b]	15.5
United States	20.4[b]	10.0

[a]Accumulated FDI outflows to Latin America (to the world) related to accumulated exports to Latin America (to the world). — [b]1985–1994

Source: Deutsche Bundesbank (c); OECD (1996); IMF (1996); UN (var. iss.).

and the United States than for Germany. Internationalization by means of outward FDI figured more prominently in economic relations with Latin America than in economic relations with the world as a whole. This applies to all industrial countries, except France. The higher FDI to exports-ratio in economic relations with Latin America is probably due to remaining import barriers that constrained the internationalization strategies of foreign firms in this region. Strikingly, however, German (and French) firms lagged significantly behind major competitors in making use of FDI as a mode of internationalization in Latin America.

The strong preference of exporting over FDI that characterizes the strategy of German firms may have hindered their responsiveness to new investment opportunities in Latin America. Furthermore, this preference implies that relocation of manufacturing activities to Latin America is a minor issue for Germany. Labor market implications of FDI in Latin America, if any, should be less pronounced in Germany than in Japan, the United Kingdom or the United States.

2. Determinants of German FDI

Recent analyses of the determinants of German FDI[5] cast further doubt on the widely held view that FDI outflows have been a major cause of labor market problems. Adverse effects on low-skilled workers in Germany might be expected if FDI had been used mainly as a means of relocating relatively labor intensive and standardized lines of manufacturing. Cost-related motivations would then dominate over market-related motivations of FDI. However, exactly the opposite pattern holds for German FDI (Box 2).

Especially in Latin America, German FDI was motivated primarily by tapping large, and often protected host country markets. Cost-related factors were of minor importance. Consequently, negative employment effects were highly unlikely. Various observations support this line of reasoning. First, as noted before, German FDI in Latin America was persistently concentrated in chemicals, electrical equipment, machinery and transport equipment (see Box 3 for major

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5 See, e.g., Klodt and Maurer (1996), Jost (1997), Deutsche Bundesbank (1997), and the literature given there.

Box 2 — FDI Determinants and Employment Effects in Germany

Various enterprise surveys and econometric analyses reveal that German FDI is motivated mainly by market-related factors. For instance, two thirds of large German enterprises surveyed in 1995 stated that they had invested abroad in order to tap new markets. Securing market shares in traditional markets and participating in host country growth were mentioned as major determinants of FDI by more than half of these enterprises. Moreover, German FDI and German exports to host countries are correlated positively. This means that FDI and exports tend to be complementary elements of internationalization strategies. The replacement of exports by FDI appears to be the exception, rather than the rule.

Cost-related determinants of German FDI have played a secondary role, but their relevance has increased in recent years. Jost (1997) has found that a real appreciation of the Deutschmark by 1 per cent, indicating a deterioration of Germany's (price-related) international competitiveness, was associated with an increase in German FDI outflows by 2.5 per cent. According to survey results, small and medium-sized German enterprises increasingly referred to FDI as a means to reduce production costs, notably by relocating labor intensive production processes to Central and Eastern Europe.

Yet, a simple correlation between outward FDI stocks (in per cent of overall capital assets) and the change in employment (1980-1994) across manufacturing industries rejects the hypothesis of adverse employment effects of German FDI (Klodt and Maurer 1996: 12 ff.). Employment losses should be concentrated in industries with significant FDI activities, if FDI were motivated primarily by cost-related factors. However, the employment record was relatively favorable in almost all manufacturing industries in which outward FDI figured prominently. This group comprises chemicals, electrical equipment, machinery and transport equipment.

characteristics of automobile production by German companies in Latin America). All these industries have a relatively favorable employment record in Germany, when the average change in employment in German manufacturing in 1980–1994 is taken as a yardstick (Klodt and Maurer 1996: Figure 5).

Second, German FDI in Latin America appears to be relatively capital intensive. For lack of better data, the ratio of employees over sales is presented in Table 5 as a proxy to compare factor intensities of German and US FDI in different regions. According to this indicator, US FDI in Latin America is somewhat more labor intensive than German FDI.[6] More importantly, German FDI was more labor intensive in Central and Eastern Europe and in Asian developing countries than in Latin America. This suggests that relocation of labor intensive production has been of minor importance with regard to German FDI in Latin America.

Third, a simple correlation exercise underscores the particularly strong market orientation of German investors in Latin America (Table 6). German investors have in common with all foreign investors that FDI stocks (per capita of host country population) tend to be higher in Latin American economies with relatively high per-capita income. In contrast to FDI from all sources, however, German FDI reveals a large country-bias: The correlation between per-capita FDI

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6 Note, however, that this difference is due exclusively to relatively labor intensive FDI of the United States in Mexico.

Box 3 — Operations of German Automobile Producers in Latin America: Changing Strategies?

International activities of major German automobile producers reveal various similarities to the pattern of overall German FDI in Latin America. First, there is a strong bias towards Latin America. This region accounted for nearly two thirds of Volkswagen's production of passenger cars in non-OECD countries in 1995 (VDA 1996: 30 f.). Its share in the production of trucks and buses by Volkswagen and Mercedes-Benz in non-OECD countries was still higher (85 per cent). Second, production is extremely concentrated within Latin America. Production activities of Volkswagen and Mercedes-Benz are essentially restricted to Argentina, Brazil and Mexico. In 1995, about 70 per cent of these companies' total production in Latin America was located in Brazil. Third, automobile production in Latin America was motivated primarily by tapping host country markets that were protected against imports.

Import restrictions had as a consequence that exporting finished cars to Latin American markets was no reasonable option for German automobile producers. It was also difficult to provide affiliates operating in Latin America with imported automotive inputs at internationally competitive terms. This, in turn, impaired the international competitiveness of automotive items produced in Brazil. It is thus not surprising that Latin American affiliates of German automobile companies were hardly integrated into the parent companies' global networking in terms of production sharing and sourcing. German imports of automotive items from Brazil and Mexico, per unit of automobile production by German-owned companies in these countries, were only a fraction of German imports of automotive items from Spain (see Table). Though less pronounced, a similar discrepancy prevails with regard to German exports of automotive items to Brazil, Mexico and Spain.

Table — Germany's Trade in Automotive Items with Selected Host Countries of German FDI, 1995 (DM per unit produced by German automobile companies in the respective host country)

	Brazil	Mexico	Spain
German imports of automobiles and parts	749	752	12 182
German exports of automobiles and parts	2 610	4 654	10 844 .

Source: VDA (1996).

Various automobile producers, including Volkswagen and Mercedes-Benz, have announced ambitious plans for additional FDI in Latin America (IADB and IRELA 1996: 41). Concentration in the largest economies of the region is likely to persist. Nevertheless, new investments may reflect a change in the strategy of major automobile producers. A first indication to this effect is that producers are integrating their operations in Argentina and Brazil. Proceeding Mercosur integration seems to have induced an increasing division of labor on the subregional level. Another indication is provided by Volkswagen's greenfield investment for the production of buses and trucks in Resende (nearby Rio de Janeiro). This project is said to represent a radical change towards modular production in Brazil, involving a high degree of cooperation with suppliers of parts and components. As it seems, corporate strategies were revised after Brazil had initiated economic stabilization and liberalization measures. This suggests that it will largely depend on local investment conditions whether Latin American host countries will become an integral part of global networking among production facilities of German automobile companies in various locations.

Table 5 — Average Size and Labor Intensity of German and US Firms in Latin America[a]

	Latin America	Argentina	Brazil	Chile	Mexico	memorandum: Asian DCs[b]	Transition economies[c]
Sales per firm							
- Germany[d]	126	111	211	39	107	57	39
- United States[e]	61	..	..	..	..	52[f]	..
Employees per firm							
- Germany[d]	232	154	403	81	209	120	139
- United States[g]	135	..	217	..	296	99	..
Employees over sales							
- Germany[d]	185	141	193	207	196	215	363
- United States[h]	205	138	190	163	283	128	..

[a]All indicators are set = 100 for German or US FDI in the world. Labor intensity is proxied by number of employees over sales. — [b]Excluding China in the case of German FDI. — [c]Including China. — [d]1995. — [e]Refers to acquisitions and establishments of non-bank affiliates in 1994. — [f]Including Japan, Australia and New Zealand. — [g]1993; non-bank affiliates. — [h]1994; non-bank affiliates.

Source: Deutsche Bundesbank (a: May 1997); US Department of Commerce (var. iss.).

Table 6 — Per-capita FDI Stocks in Latin America in 1995: Pearson Correlations with Host Country Characteristics[a]

	Host country characteristics: Population, 1995	Per-capita income, 1995 (US$)	Average annual growth of per-capita income, 1985–95
German FDI	0.74**	0.75**	0.10
FDI from all investor countries	0.31	0.64**	0.47*

[a]See Table 2 for per-capita FDI stocks and for the host countries under consideration; number of observations = 15; ** (*) denotes statistical significance at the 1 (10) per cent level.

Source: Table 2; World Bank (1997).

stocks and the size of Latin American host countries (in terms of population) turned out to be insignificant for all foreign investors, whereas it was highly positive for German investors.

3. German Investors' Response to New Investment Opportunities in Latin America

The less diversified nature of German FDI in Latin America seems to be a relevant factor for explaining the relatively weak response of German investors to new investment opportunities. For instance, the large country-bias may have weakened the reaction of German investors to economic policy reforms in Chile. In addition, the traditional focus on the manufacturing sector helps to explain the underrepresentation of German investors in this country, where the primary sector accounted for a high and rising share in overall FDI stocks held by all foreign investors (1995: 59 per cent; IADB and IRELA 1996: Statistical Annex, Table 52). Table 6 provides more general support to the proposition of a rather weak response of German investors to new investment opportunities ensuing from policy reforms. In contrast to FDI from all sources, the correlation between per-capita FDI stocks held by German investors in 1995 and average annual growth of per-capita income in Latin American host countries turned out to be insignificant.

New investment opportunities were also offered by several Latin American economies in the context of privatization programs (Nunnenkamp 1997a: 73–75). Privatization mainly involved service activities such as telecommunications, transportation, financing and electricity supply. FDI related to privatization figured prominently, for example, in Argentina, Peru and Venezuela. Note that the share of each of these countries in German FDI stocks declined between 1985 and 1995, whereas their share in FDI stocks of all foreign investors in Latin America increased during the same period (Table 2). Similarly, German FDI flows to Brazil dwindled from DM 1.7 billion in 1995 to DM 237 million in 1996 (Deutsche Bundesbank c), i.e., exactly when "Brazil strengthened its position as a recipient of European FDI as a result of the sale of state assets through its privatization programme" (IRELA 1997: 37). This strongly suggests that German investors participated less in Latin American privatizations than investors from other countries.[7]

Arguably, German investors were at a competitive disadvantage in making use of new investment opportunities in Latin America. US competitors may have benefited from lower transaction costs because of proximity to, and institutional ties with some Latin American economies (notably Mexico). For several reasons,

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7 Direct evidence on the participation of German investors in Latin American privatizations is lacking. However, investors from other countries appear to have been the dominant players in major FDI projects in the context of privatization programs (IADB and IRELA 1996: 47 ff.).

however, it is hardly convincing to blame exogenous factors for the rather inflexible behavior of German investors:

- Latin American host countries did not discriminate against FDI from sources other than the United States. To the contrary, some of them seem to be interested in diversifying the sources of FDI inflows in order to reduce the dominance of US investors.
- According to Figure 2, longer-term growth of German FDI stocks was relatively weak not only compared with US FDI, but also compared with Japanese FDI which is unlikely to have benefited from lower transaction costs.
- Various investors from other European countries participated successfully in Latin American privatizations (IADB and IRELA 1996: 47 ff.).

Hence, inflexibility seems to be mainly due to specifically German factors. In addition to structural features of German FDI, the strong bias towards exports that has characterized the internationalization strategy of German firms for many years may have reduced flexibility in responding to new investment opportunities. This bias worked against German participation in the expanding services sector of Latin American economies, considering that services mainly consist of non-tradables.[8] Furthermore, various service activities in Germany remained strictly

8 Services accounted for 55 per cent of Latin America's GDP in 1995 (World Bank 1997: Table 12). In 1990–1995, service sector growth amounted to 3.8 per cent per annum, compared with industry growth of 2.5 per cent (ibid: Table 11). At the same time, the share of the tertiary sector in total inward FDI stocks increased significantly in various Latin American economies (IADB and IRELA 1996: Statistical Annex, Tables 49-57).

regulated or were still run by inefficient state-owned enterprises. As a consequence, there may have been a lack of competitive German bidders for service companies to be privatized in Latin America. Finally, Table 5 points to a fairly large average size of German FDI projects in Latin America, by the standards of US FDI in Latin America and German FDI in other developing regions. This implies that few large players dominated German FDI in Latin America, while the underrepresentation of small and medium-sized German firms may have further reduced adjustment flexibility.

V. CONCLUSIONS AND FUTURE PROSPECTS

German FDI patterns in Latin America reveal various peculiarities, compared with FDI from other sources in Latin America and German FDI in other developing regions. These peculiarities have important implications for Germany *and* Latin American host countries. A major conclusion for Germany is that past FDI in Latin America is highly unlikely to have added to labor market problems. Concerns in Germany should rather be that investors have made less use of new investment opportunities in Latin America than foreign competitors. This may not only impede closer investment relations with Latin America in the future. In the longer run, German exports to this region may be negatively affected as well. According to empirical evidence, FDI and exports tend to be complementary means of international marketing and sourcing. This complementarity will increasingly dominate over substitution effects between particular elements of internationalization strategies if the trend towards liberalizing external trade and deregulating FDI continues.

Likewise, concerns about FDI diversion currently prevailing in Latin America seem to be misplaced. The particularly keen interest of German firms to invest in Central and Eastern Europe is unlikely to have resulted in significant redirection of FDI to the detriment of Latin America. Empirical evidence rather suggests that German FDI in different regions complements each other. This is not to ignore that the characteristical features of past German FDI involve some risks for Latin American host countries:

– First of all, the predominant orientation of German investors towards host country markets may become weaker in the future. The current trend towards globalized production and marketing tends to alter the form and purpose of FDI. Geographically dispersed manufacturing and the combination of markets and resources through investment and trade are increasingly becoming an integral part of the world economy. As a consequence, "one of the most important traditional FDI determinants, the size of national markets, has decreased in importance. At the same time, cost differences between locations, the quality of infrastructure, the ease of doing business and the availability of skills have become more important" (UNCTAD 1996: 97). Multinational firms from different countries may respond to different degree and with varying speed to the changing international environment, but German FDI is unlikely to remain unaffected in the longer run if the balance shifts from market-seeking to efficiency-seeking FDI.

- More specifically, trade liberalization has weakened the incentive to undertake FDI in order to surmount import barriers. This involves a critical dilemma for Latin America where, traditionally, the bulk of FDI was market-seeking rather than efficiency-seeking. In the longer run, the move towards liberalization of trade and deregulation of FDI is instrumental to closer integration of Latin American economies into global sourcing and marketing networks of multinational enterprises, as this move supports specialization according to comparative advantage. In the short term, however, vanishing constraints concerning the mode of integrating Latin America into corporate strategies may have as a result that exporting becomes more attractive than FDI. This may affect German FDI in the first place, taking into account that German firms, in general, reveal a strong preference of exporting over FDI. Furthermore, recent trade patterns indicate that Latin America still lacks international competitiveness in industries traditionally preferred by German investors. Revealed comparative advantage was negative in 1994 for the chemical industry as well as for machinery and transport equipment.[9]

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9 Revealed comparative advantage (RCA) is calculated as: $RCA_i = (X_i - M_i) : (X_i + M_i)$, with: X = exports, M = imports, i = manufacturing industries. RCA may range from -1 (no exports) to 1 (no imports). In 1994, RCA was -0.41 for chemicals and -0.35 for machinery

In summary, future investment relations between Germany and Latin America will depend on whether Latin American host countries succeed in improving international competitiveness in industries in which German FDI is concentrated. The revival of regional integration in Latin America may be a mixed blessing in this respect. It may lead to a more efficient division of labor on the regional level and, thus, induce FDI from companies adopting regional or subregional strategies. However, regional integration is not sufficient to remain attractive for FDI. It basically aims at market-seeking FDI, which tends to be concentrated in large and relatively advanced member countries of regional integration schemes. The chances to attract efficiency-seeking FDI may even deteriorate if regional integration is pursued in a way that discriminates significantly against non-member countries. It is openness towards world markets which matters most for becoming integrated into globalized production and marketing.

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and transport equipment (calculated on the basis of data from UN, var. iss.). RCA turned out to be negative (-0.13) for passenger road vehicles, too, although imports in this subsector of machinery and transport equipment were seriously restricted in various Latin American countries.

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