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The European Union in the Era of Globalisation

Competitive Challenges, Structural Unemployment, and Policy Responses*

By Erich Gundlach and Peter Nunnenkamp**

I. Introduction

The unemployment rate in the EU has surpassed 11 percent in early 1994. It may be tempting to attribute the rise in unemployment to short-term factors such as the recession and high interest rates. But why, then, has European unemployment been persistently above the US rate (of 6 percent recently) since the early 1980s, not to speak of Japan where the rate is still only slightly above 2 percent? And why does hardly anybody expect drastically improved labour market conditions, although a significant growth stimulus was widely anticipated from the completion of the Single European Market?

In the following, it is argued that impaired competitiveness of EU industries is at the heart of labour market problems. Competitive pressures have mounted because the international division of labour through trade has been complemented by corporate globalisation strategies, i. e. the geographical fragmentation of production processes and the relocation of manufacturing activities at a worldwide scale. The EU has dealt with these challenges less successfully than the two other members of the Triad. Economic policy in the Community has been focused on regional integration, and discouraged European companies to go global and thereby to improve their competitiveness. Furthermore, it has been largely ignored that globalisation implies a closer integration of international labour markets. It turns out that the effectiveness of traditional means to maintain employment in ailing industries is ser-

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iously eroded under conditions of globalised production and markets. Therefore, alternative policy options have to be considered in order to restore competitiveness and reduce unemployment.

II. Competitive challenges

The EU has been outperformed on world markets by both Japan and the US. Its share in worldwide manufacturing exports declined by 4.5 percentage points to 17.6 percent within a decade (excluding intra-EU trade), while the corresponding loss remained marginal for the US, and increased market shares are reported for Japan.[1] At the same time, the EU has become a major target of trade expansion and globalisation strategies by traditional and newly emerging competitors. As a result, the EU trade balance for high-tech products has worsened progressively; the growth rate of EU imports of hightech products nearly doubled that of the corresponding EU exports [Commission of the EC, 1993].

New competitive suppliers on EU markets

Notwithstanding the stimulus for intra-EU trade which was expected from the Internal Market programme, EU imports of manufactures from non-member countries increased at a similar rate as intra-EU imports in the period 1980-92 (Table 1). In addition to the US and Japan, developing countries (DCs) have established themselves as serious competitors on EU markets (Table 2). Manufacturing exports by DCs to the EU are dominated by the four Asian tigers (Hong Kong, Singapore, South Korea and Taiwan). However, other Asian DCs are catching up quickly. Especially since the mid-1980s, booming market shares are recorded for China and a group of Southeast Asian countries. Competition from DCs will gain further momentum as many Latin American countries have stabilised and liberalised their economies recently to restore international competitiveness.

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[1] Data refer to the period 1980-91 and are from UN [1993].

Table 1

Growth of EU Trade of Manufactures, 1980-1992 (1980 = 100)

	Total manufacturing	Machinery, transport equip.	Chemicals	Iron and steel	Clothing and textiles
			Intra-EU trade		
1986	195.8	211.3	195.2	153.8	194.3
1992	323.4	381.9	311.0	194.8	271.3
			Extra-EU exports		
1986	160.4	158.8	161.2	125.8	189.9
1992	211.4	214.5	233.4	110.1	245.8
			Extra-EU imports		
1986	178.6	208.3	186.1	126.3	145.3
1992	316.9	386.3	298.0	164.2	270.6

Source: EUROSTAT [var. iss.].

Table 2

The Regional Structure of Extra-EU Imports of Manufactures,[a] 1980 and 1992

		Total	Machinery, transport equip.	Chemicals	Iron and steel	Clothing and textiles
US	1980	24.9	35.6	33.2	6.5	8.1
	1992	21.2	27.1	28.3	3.3	4.0
Japan	1980	11.7	20.5	4.5	7.7	2.5
	1992	16.1	26.2	7.7	3.4	2.1
DCs	1980	16.5	7.7	10.5	10.6	45.2
	1992	21.4	17.0	11.7	12.4	48.6
thereof:[b]						
Asian NIEs[c]	1980	47.9	59.1	4.5	15.6	46.3
	1992	42.6	59.3	19.4	17.7	26.7
China	1980	5.6	0.5	14.7	0.1	6.8
	1992	22.1	11.1	18.9	3.2	23.2
Southeast Asia[d]	1980	6.7	8.8	2.0	1.9	6.4
	1992	16.5	14.6	4.5	2.8	18.0
Latin America	1980	11.4	14.3	22.9	34.8	7.6
	1992	9.2	9.2	25.2	48.4	3.8

[a] Percent of extra-EU imports if not indicated otherwise. - [b] Percent of extra-EU imports from DCs. - [c]Hong Kong, Singapore, South Korea, Taiwan. - [d]Indonesia, Malaysia, Philippines, Thailand.

Source: EUROSTAT [var. iss.].

Table 2 further reveals that the growth of DC exports to the EU was not restricted to traditional industries such as clothing and textiles. As a matter of fact, competitive pressures were strong in human capital

intensive sectors such as machinery and transport equipment as well [see also Commission of the EC, 1993]. Asian DCs have rapidly moved into sophisticated segments of manufacturing. This development has been indirectly supported by EU trade policies. Market access for low-cost suppliers was restricted for products considered "sensitive" (e. g. textiles and clothing, iron and steel) so that different factor endowments were partly denied their role in shaping the international division of labour. DCs were more or less forced to compete on markets for more sophisticated products. Their chances to do so were enhanced by greater mobility of financial capital and easier access to technology since the early 1980s. The changing pattern of EU imports thus provides first indications as to the limited effectiveness of trade policy in restricting overall trade and import competition. Import protection granted to ailing industries was equivalent to an implicit tax on exports. As a result, part of the adjustment burden has been shifted towards sectors in which advanced EU economies should possess comparative advantages.

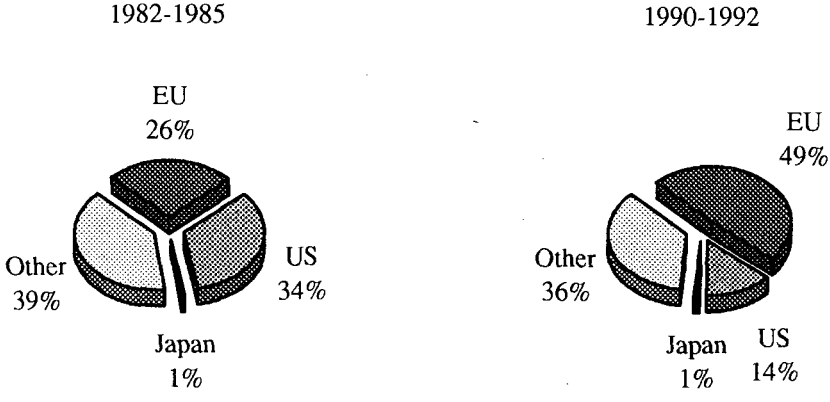
The EU as a target of globalisation strategies

With the recent trend towards globalised production patterns, EU industries have received another competitive blow. Worldwide sourcing and marketing have become major parameters of competitiveness by offering cost savings and new sales outlets. Various factors have encouraged globalisation: Transaction and information costs have declined, capital markets have been liberalised, and many business services have become tradable. The boom of foreign direct investment (FDI) is the clearest indication of globalisation. In 1982-92, worldwide FDI flows grew 3.3 times faster than international trade flows.

The EU figures prominently among the principal targets of globalisation strategies by international investors. The region's share in worldwide FDI inflows nearly doubled to 49 percent (Figure 1). FDI stocks held by US and Japanese investors in the EU increased relative to their overall FDI stocks.[2] The EU's attractiveness for foreign risk capital is largely because international investors anticipated the completion of the Single European Market and its extension to prospective member countries [Hiemenz et al., 1994]. Fears of restrictive trade policies may have

[2] Comparing 1982 and 1992, the EU's share in US FDI stocks increased from 35.8 to 41 percent; the respective shares in Japanese FDI stocks amounted to 10.3 and 18.3 percent [OECD, c].

induced FDI in some instances, e. g. Japanese investment in the automobile industry, as FDI provided a means to jump over protectionist fences. However, the larger part of FDI appears to be motivated by market integration and cost advantages at the EU periphery, which did not only benefit EU producers but also outside investors. Somewhat ironically, European integration has strengthened the globalisation of major competitors.[3]



Source: IMF [a].

Figure 1: Regional Distribution of Global FDI Inflows

FDI inflows should have helped to generate new jobs in EU economies. However, earlier expectations according to which the Internal Market programme would help significantly to overcome competitive disadvantages of domestic industries were not well founded. Exactly the opposite may happen, if policy makers and entrepreneurs in the EU consider regional integration to be an alternative to globalisation and ignore the effects of fiercer competition on labour markets.

[3] It is important to note that the higher share of EU hosts in overall US and Japanese FDI stocks is due to additional FDI, rather than FDI diversion at the expense of other host regions. Both US and Japanese investors expanded their engagement in all major regions in absolute amount [OECD, c]. About 27 percent of US FDI stocks continued to be held in DCs. US FDI stocks held in Japan quadrupled to US$ 26.4 billion in the period 1982-92. For Japanese investors, the US remained the most important host country by far. Japanese FDI stocks held in Asian DCs soared from US$ 15 billion in 1982 to US$ 60 billion in 1992.

Regionalisation versus globalisation of EU investors

The Internal Market programme has provoked unprecedented amounts of FDI of EU member countries to each other. The intra-EU share of FDI outflows soared to 57 percent in 1991 (Table 3). Rising FDI shares are also reported for non-EU hosts within Europe, which can be attributed to pending integration widening. The regional distribution of FDI outflows is consistent with the view that EU investors focused their attention on the emerging Internal Market.

Table 3

Regional Distribution of EU FDI Outflows,[a] 1985-1991 (million ECU and percent)

	1985-87[b]	1988-90[b]	1991
World (mill. ECU)	42310	76108	74933
Industrialised countries	87.5	89.3	82.8
EU(12)	30.6	50.6	57.3
Rest of Europe	3.1	4.1	4.5
US and Canada	49.9	30.2	17.6
Japan	0.7	0.9	0.7
Central and Eastern Europe	0.1	0.2	1.6
Developing countries[c]	9.5	8.4	10.1
Africa	0.7	1.2	1.3
Latin America	5.9	4.8	5.0
Middle East	0.7	0.6	1.0
Asia	2.2	1.7	2.7
Asian NIEs[d]	1.7	1.1	1.1

[a] Without Greece and Ireland. – [b] Annual average. – [c] Data for the individual regions are in many cases incomplete. – [d] Hong Kong, Malaysia, Singapore, South Korea, Taiwan, Thailand.

Source: OECD [c]; Deutsche Bundesbank [1993].

The increasing regional concentration of FDI was mainly at the expense of the EU's engagement in the US, whose share in FDI outflows dwindled to 18 percent. In striking contrast to the behaviour of Japanese investors who expanded their engagement in both the US and the EU, European investors reduced their engagement in the US in absolute amounts, though only very recently. While this reduction may be partly a cyclical phenomenon, it may also indicate that European integration has retarded the globalisation of EU investors. It is consistent with this interpretation that EU FDI in Japan and Asian NIEs remained marginal, although these economies represent the world economy's growth pole and have emerged as most competitive suppliers of goods and services.

Especially in Asian NIEs, EU investors are still heavily underrepresented as compared to Japanese and US investors.[4] This implies that chances for cost savings through global sourcing as well as profit opportunities through penetrating promising markets in Asia were forgone.

Relatively weak efforts towards globalisation by EU companies, measured by Japanese and US standards, can be attributed at least partly to economic policies in the EU. Direct government involvement, e. g. in the automobile industry, and massive financial incentives to locate production facilities in backward regions of member countries have discouraged globalisation. Trade restrictions, e. g. the export restraint agreement on Japanese cars, have retarded the adjustment and restructuring of EU companies. At the same time, such restrictions provided a further stimulus to globalisation of foreign competitors, as FDI offered a means to circumvent export restraints.

Recent policy initiatives by the EU Commission cannot solve this dilemma. The attempt to support coordinated efforts by EU manufacturers and input suppliers to strengthen their innovative capacity and competitiveness through joint R & D projects, training programmes, and the dissemination of new production techniques is likely to remain ineffective for two reasons. First, the targeting of policy incentives is becoming increasingly difficult, the more non-EU competitors are operating in the EU and the more interlinkages among producers of different origin exist.[5] Second, closer cooperation among EU companies is insufficient to meet the global challenge of fiercer competition on EU markets. In view of the greater cost efficiency of Japanese producers[6] and with new competitors emerging in Asian NIEs, regionalisation is no promising alternative to catching up in terms of globalisation.

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[4] While the six Asian NIEs considered in Table 3 attracted little more than 1 percent of EU outflows, their share in Japanese and US FDI outflows amounted to 9.4 and 7.6 percent in 1990-92.

[5] It can, of course, be argued that the targeting of incentives on EU companies is unreasonable anyway. Rather than supporting the competitiveness of EU companies, economic policy should aim at improving the EU's attractiveness for domestic *and* foreign investors. FDI inflows may well contribute to an improved world market performance of EU economies.

[6] For example, the average productivity of assembly plants of European car producers was only half the productivity of their competitors in Japan [Womack et al., 1990]. The unit cost reductions of about 5 percent expected from the Internal Market programme were, thus, insufficient to restore competitiveness.

III. Adjustment problems and strategic responses

International trade between countries with different factor endowments is well known to put adjustment pressure on the relatively scarce factor of production [Stolper, Samuelson, 1941]. Compared to physical and human capital, low-skilled labour is relatively scarce in the EU and in other industrialised countries. Hence, it can be posited that the employment chances of and the returns to low-skilled labour are negatively affected by DCs making use of their abundant labour supply and exporting labour intensive products.[7] The ensuing adjustment needs in industrialised countries have traditionally been contained by restricting labour intensive imports and, thereby, protecting low-skilled workers. However, economic policies aiming at protection are increasingly constrained in the era of globalisation [see also Dicken, 1992]. The higher mobility of capital and the easier access to technology render it feasible for DCs to upgrade their exports. The effectiveness of import restrictions is undermined as trade barriers may be circumvented by relocating production, which, in turn, gives rise to trade and more competition in non-regulated areas. Furthermore, the international fragmentation of production processes, made possible by technological innovations as well as lower transaction and information costs, largely destroys the natural protection of less mobile factors of production, which may have existed before due to technological complementarities between skilled and unskilled workers in advanced countries.

Globalisation, trade and FDI

The globalisation hypothesis, according to which both FDI and trade are driven by a common set of determinants, is supported by the empirical evidence which shows a positive correlation between FDI outflows of major investor countries on the one hand, and their exports to *and* imports from the host countries on the other hand. Table 4 presents simple cross-section correlation coefficients for bilateral trade and FDI flows for Germany, Japan, and the US in recent years. German and Japanese FDI flows to host countries, including developing and

[7] This is not to deny that the pressure on labour markets may also stem from other sources, notably labour saving technological progress (see also below). On the relevance of trade and technological change for determining labour market outcomes, see e. g. Lawrence [1994], Lawrence and Slaughter [1993], Leamer [1992], OECD [d], and Wood [1994]. In any case, it is open to question to which extent technological change is exogenous or, rather, induced by increased import competition [see also Lloyd, 1994].

industrialised countries, are positively correlated in a statistically significant way with trade flows (both exports and imports); and the same broad picture holds for lagged FDI flows (one and two years, respectively). Hence the higher contemporary and past FDI flows to foreign countries in absolute value, the higher are German and Japanese exports to the host countries and the higher are imports from these countries. This finding is in conflict with the widespread belief that FDI simply replaces trade.

Table 4

Recent Trade and FDI Flows: Pearson Correlation Coefficients[a, b]

FDI	Exports			Imports		
	t	t+1	t+2	t	t+1	t+2
			1. Germany			
1989	0.67**	0.66**	0.62**	0.63**	0.61**	0.61**
	(34)	(34)	(34)	(34)	(34)	(34)
1990	0.70**	0.67**	0.68**	0.66**	0.65**	0.66**
	(34)	(34)	(34)	(34)	(34)	(34)
1991	0.59**	0.60**	-	0.58**	0.58**	-
	(34)	(34)		(34)	(34)	
1992	0.72**	-	-	0.69**	-	-
	(31)			(31)		
			2. Japan			
1989	0.96**	0.95**	0.94**	0.89**	0.90**	0.89**
	(40)	(40)	(40)	(40)	(39)	(40)
1990	0.94**	0.93**	0.93**	0.90**	0.89**	0.88**
	(42)	(42)	(42)	(41)	(42)	(42)
1991	0.93**	0.93**	-	0.90**	0.89**	-
	(44)	(44)		(44)	(44)	
1992	0.93**	-	-	0.92**	-	-
	(42)			(41)		
			3. United States			
1989	0.19	0.20	0.19	0.07	0.09	0.07
	(37)	(37)	(37)	(37)	(37)	(37)
1990	0.41**	0.43**	-	0.32*	0.31	-
	(39)	(39)		(39)	(39)	
1991	0.35*	-	-	0.24	-	-
	(38)			(38)		

*(**)Indicates statistical significance at the 5 percent (1 percent) level. - [a] In parenthesis: number of countries. - [b] t refers to contemporary trade and FDI flows; t+1 (t+2) refers to lagged (one and two periods) FDI flows.

Source: IMF [b]; Ministry of Finance Japan [var. iss.]; OECD [c]; unpublished material from Deutsche Bundesbank.

For the US, the statistical correlation between FDI and trade flows is much weaker. Two reasons can be considered for the different pattern of trade and FDI flows of the US on the one hand, and Germany and Japan on the other hand. First, FDI flows of the US reveal a different

sectoral distribution and are more volatile. The primary sector accounts for a relatively large part of US FDI flows. Extremely high shares of resource-based industries such as mining and quarrying, and oil were reported in 1984 (75 percent) and 1987 (35 percent).[8] Obviously, globalisation strategies do not aim at the primary sector so that the expected positive correlation of trade and FDI flows is likely to be distorted in the case of the US.[9]

The second reason for the different patterns of FDI and trade flows is that US FDI displays a different regional composition as compared to the other two home countries. Although all three investors focus on the OECD area as their main target of FDI, this share is lowest for the US with about 65 percent of total FDI, while the respective shares for Germany and Japan range between 70-80 percent and more than 90 percent [OECD, c]. With regard to remaining FDI flows, Japanese investors prefer the Asian region to Latin America by a factor of 2, while US investors prefer Latin American to Asian hosts by a factor of 5; German investors also prefer Latin America, but less so than US investors. FDI in Latin America was more likely to replace trade; a significant fraction of it was motivated by securing market shares in the wake of trade barriers and extremely volatile exchange rates, which were characteristic of many Latin American economies [Agarwal et al., 1991].

Both the sectoral and the regional peculiarities of US FDI may weaken the positive correlation between trade and FDI flows expected from the globalisation hypothesis. To a lesser extent, this may also apply for German investors whose engagement in Latin America was stronger than that of Japanese investors. To get some information on the empirical relevance of this effect, the robustness of the previous trade-FDI correlation is tested by introducing an additional explanatory variable. As is almost self-evident, market size can be regarded as an additional important factor explaining trade patterns. Therefore, this variable should be correlated with bilateral trade flows. From a statistical point

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[8] See OECD [c]; on average, resource-based industries accounted for 5 percent of US FDI outflows in 1981-91, whereas their share amounted to about 2 percent in the case of Japan and even less in the case of Germany.

[9] A more appropriate test of the globalisation hypothesis would be to correlate trade flows with bilateral FDI flows for manufacturing industries, rather than with total FDI flows. Yet sectorally disaggregated data on FDI flows by host countries are not available from official statistical sources. OECD statistics report FDI flows either by regional *or* sectoral disaggregation; US statistics report disaggregated FDI *stocks* but not FDI flows.

of view, the question arises whether market size, as measured by gross domestic product (GDP) in the host country, or FDI flows have a larger statistical impact on trade flows. This can be checked by regression analysis.

If globalisation strategies explain the positive link between FDI and trade flows, it follows that for Japan, with a sectoral and regional structure of FDI flows most compatible with globalisation, market size should not dominate the impact of FDI on trade flows. By contrast, if a larger fraction of FDI flows is devoted to resource-based industries and FDI flows show a regional pattern which is less likely to be motivated by globalisation strategies, the impact of market size may dominate the impact of FDI. Such an outcome can be expected for the US. For the case of Germany, something in between these two extremes should result.

Table 5 presents beta coefficients which were derived from a cross-country regression of bilateral exports (imports) on bilateral FDI flows and GDP in the host country. The beta coefficients measure the change in exports (imports) in standard deviation units for a unit change in each explanatory variable in standard deviation units, holding constant the other variable. Since beta coefficients are independent of the units of measurement, they can be used to compare the relative impact of the explanatory variables. The results are largely in line with a priori expectations. For a statistical explanation of bilateral Japanese trade data, FDI flows seem to be more important than market size. This finding strongly confirms the globalisation hypothesis. Not surprisingly, market size seems to be more important than FDI flows in most calculations for the US. This finding means that given the data at hand, the globalisation hypothesis can neither be confirmed nor rejected for the US. However, it cannot be concluded that globalisation is irrelevant for US investors, as the results for the US, too, point to a positive correlation of FDI and trade flows. For Germany both market size and FDI flows seem to be important determinants of trade, but the weight of FDI has increased in recent years.

All in all, our findings support the consensus result of most empirical research in this field: FDI and trade flows are positively correlated,[10] which is in line with the globalisation hypothesis.[11] Rather than FDI

[10] This result is also confirmed by a recent empirical analysis which focuses on extra-EU trade and investment flows [Greenaway, 1993].

[11] However, the regression results also demonstrate that there is no clear-cut pattern regarding trade and investment flows that can be identified by a simple

Table 5

The Statistical Impact of FDI and GDP on Trade (Beta Coefficients)[a]

	1. Germany			
	Exports		Imports	
	GDP	FDI	GDP	FDI
1989	0.50*	0.44*	0.55*	0.37*
1990	0.50*	0.48*	0.54*	0.40*
1991	0.40*	0.55*	0.40*	0.53*
1992	0.31*	0.72*	0.30*	0.70*
	2. Japan			
	Exports		Imports	
	GDP	FDI	GDP	FDI
1989	0.25*	0.68*	0.34*	0.49*
1990	0.22*	0.64*	0.31*	0.55*
1991	0.30*	0.59*	0.37*	0.48*
1992	0.31	0.59*	0.17	0.67*
	3. United States			
	Exports		Imports	
	GDP	FDI	GDP	FDI
1989	0.56*	0.36*	0.68*	0.15
1990	0.39*	0.53*	0.45*	0.43*
1991	0.54*	0.29	0.55*	0.30

*Indicates statistical significance at the 5 percent level. - [a] Beta coefficients computed from a regression of exports (imports) on Gross Domestic Product and FDI flows; all variables in logs; annual data.

Source: IMF [b; c]; Ministry of Finance, Japan [var. iss.]; OECD [c]; unpublished material from Deutsche Bundesbank.

causing trade or trade causing FDI in a unidirectional way, the direction and extent of trade and FDI flows are simultaneously determined by globalisation strategies. As a consequence, FDI is not only positively correlated with exports of home countries, but also with exports of host countries.

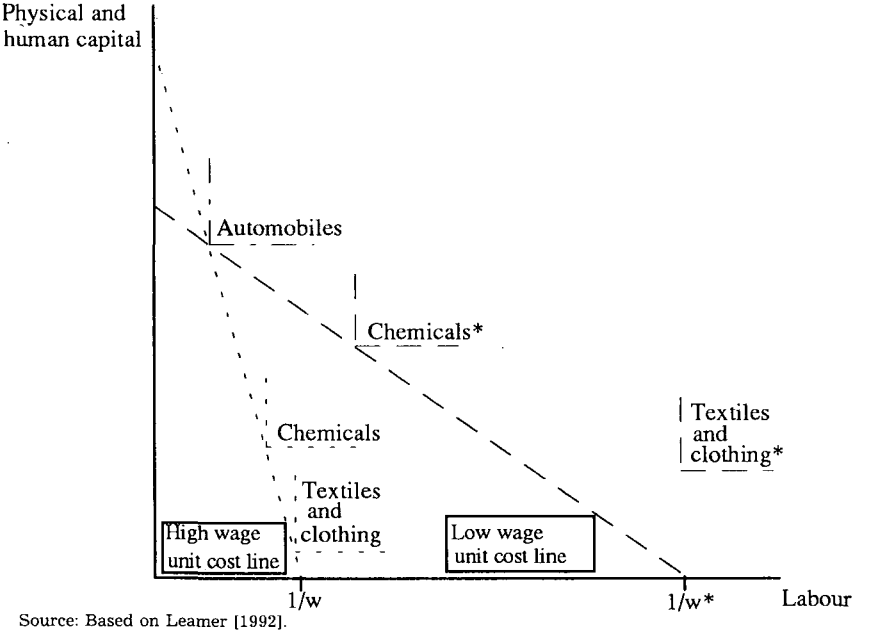
Globalisation, structural change, and relative wages

In effect, globalisation results in a closer integration of worldwide labour markets. This development favours high-skilled workers in industrialised countries, who have relatively few foreign competitors. By contrast, unskilled workers face an almost perfectly elastic supply of low-paid competitors around the world. For them, globalisation tends

cross-section analysis. The different results for the three major investor countries indicate that the positive correlation between FDI and trade flows should be carefully interpreted. Obviously, other variables such as different productivity levels, different sectoral and regional preferences of investors, and the sometimes volatile character of FDI flows should be taken into account for a more comprehensive description of cross-country trade flows.

to amplify the adjustment pressure that would have resulted from international trade alone. Hence, the members of the Triad had no choice but to reduce production costs and to increase productivity through industrial restructuring in favour of human capital intensive lines of production, in order to secure employment and remain competitive.

The theoretical framework underlying this interpretation can be outlined in a simple diagram (Figure 2).[12] The axes denote quantities of capital (physical and human) and labour (unskilled). The right angles represent so-called unit value isoquants, i. e., combinations of capital and labour that are required to produce, say, one dollar's worth of output.[13] The unit value isoquants are drawn for three different sectors: the automobile industry which uses human and physical capital relatively intensively, the chemical industry which is physical capital intensive, and textiles and clothing which represent the most labour intensive industry in this illustrative example.



Source: Based on Leamer [1992].

Figure 2: Hypothetical Effects of Globalisation on the Structure of Production and Wages in Advanced Countries

[12] The following paragraphs heavily draw on Leamer [1992].

[13] The isoquants are drawn with right angles to indicate that the ratio of capital to labour is assumed to be technologically fixed. This assumption is immaterial for the qualitative results derived below.

The figure also displays two unit isocost lines, which represent combinations of capital and labour that cost just one dollar to employ. It turns out that the wage for (unskilled) labour is given by the inverse of the intersection of the isocost line with the labour axis.[14]

In the initial situation, the isocost line is drawn tangential to the unit value isoquants of all three sectors. If this line falls below of one of the unit value isoquants, the costs of production in this industry exceed the value of the output and hence, no output would be produced. By contrast, if the isocost line would cross a unit isoquant, production costs would be lower than the value of output in this industry and hence, excess profits would attract a resource inflow thereby either raising the factor prices or reducing the product prices so that finally the tangency condition would be restored.

The impact of globalisation for advanced countries can be demonstrated by an outward shift of the unit value isoquants for textiles and clothing. Globalisation means first of all an increase in the worldwide supply of relatively low-skilled labour and second, the general availability of relatively ubiquitous technologies. According to the Rybczynsky Theorem [Rybczynsky, 1955], this should lead to an increase in the supply of low-skilled labour intensive goods and of goods that can be produced with standardised technologies. In turn, this increase in supply should reduce the relative price of such goods. A declining product price implies an increase in quantities of inputs to keep the unit value constant, and, therefore, the outward shift of the unit value isoquants. From the point of view of advanced countries, this shift will be strongest where the underlying supply effects can be expected to have the strongest effect on the relative product prices.

In the diagram, the strongest shift in relative prices has been assumed for textiles and clothing, which is the most low-skilled labour intensive industry. The new theoretical equilibrium is given by a new isocost curve, which is only tangential to automobiles and chemicals. Hence, according to the diagram, the advanced countries would not produce clothing any longer, and instead specialise on the more human and physical capital intensive production of automobiles and chemicals. The new equilibrium implies a reduced wage for unskilled labour, relative to the factor reward for human and physical capital. This is indicated by the new intersection of the isocost line with the labour axis at $1/w^*$.

[14] The equation for the isocost line reads $1 = wL + rK$, where w is the wage for unskilled labour L, and r is the factor reward for physical and human capital K. At the intersection of the isocost line with the labour axis, K equals zero. Therefore, $L = 1/w$ at this point.

The upshot of all this is that the wage for unskilled labour will tend to fall if globalisation reduces product prices in the labour intensive industries relative to the prices in the (physical and human) capital intensive industries. Hence, in the absence of an exogenous source of productivity growth, low-skilled workers in advanced countries would be worse off under conditions of globalisation than under conditions of nationally segmented production and markets, which is the basic message of the Stolper-Samuelson Theorem.

Some of the assumptions underlying this purely theoretical argumentation are that international prices of the products are given, that the advanced countries' factor supplies actually are in the high wage cone, and that DCs, which are labour rich, are in the low wage cone. In the absence of any barriers that hinder international transactions, there would be no output of low-skilled labour intensive goods in advanced countries, and, correspondingly, no output of human capital intensive goods in DCs. In reality, transport costs, temporary economies of scale, and immobile inputs all contribute to maintaining an industry structure that would be obsolete otherwise. The message from the theory we want to stress is that, in the presence of globalisation, there are economic forces at work which push for moving the production of low-skilled labour intensive (final and intermediate) goods to DCs, with the consequence of a widening wage gap between skilled and unskilled workers in advanced countries. Some support for this reasoning comes from comparative empirical evidence for the labour market.[15]

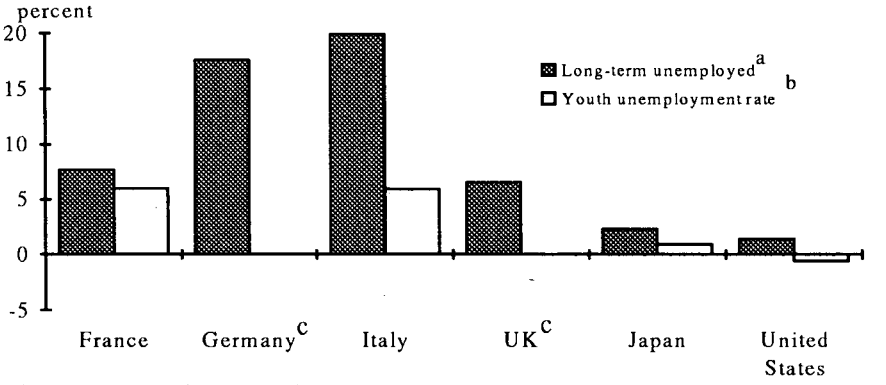
Labour markets and relative prices

While the three major players in the world economy have been confronted with similar adjustment problems raised by the globalisation of markets and production, labour market outcomes were strikingly different. EU economies contrast significantly with Japan and the US:[16] *Unemployment* rose sharply in Europe throughout the 1980s, while employment remained unchanged or fell. In Japan and the US, *employment* rose and unemployment was constant or even declined. Comparable information on the structure of unemployment according to different skill levels is not readily available. However, conventionally used proxies (such as changes in long-term unemployment and in youth

[15] For the most recent detailed overview of different labour market experiences in OECD countries, see OECD [d].

[16] The following observations refer to data provided by OECD [b].

unemployment) indicate that unemployment of *low-skilled workers* increased much faster in EU countries than in Japan and the US (Figure 3).



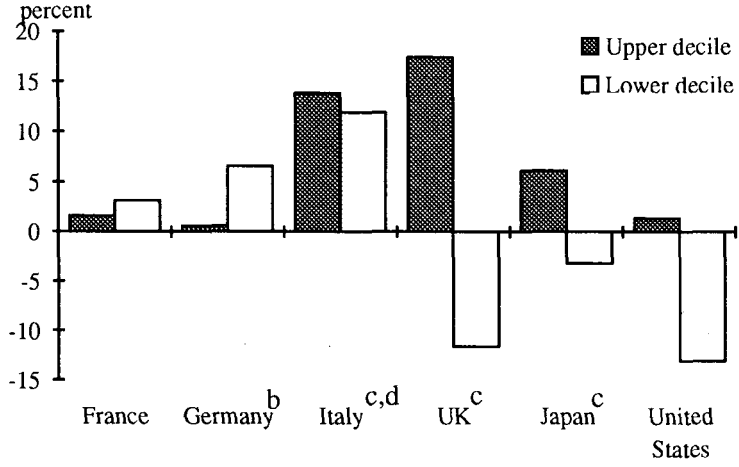
[a] As a percentage of total unemployment, 12 months and more.
[b] France, Japan: age 15-24; Italy: age 14-24; United States: age 16-24.
[c] Changes in the youth unemployment rate not available due to break in the series.
Source: OECD [b].

Figure 3: Changes in the Structure of Unemployment, 1979-1990

Evidence on the distribution of earnings within the economies under consideration helps to explain this puzzling picture. It can reasonably be assumed that the higher (lower) end of the earnings distribution represents the wages of high-skilled (unskilled) workers. Figure 4 then suggests a declining wage dispersion in major EU economies, as the wages of unskilled workers improved relative to the wages of high-skilled workers.[17] By contrast, the wage gap widened in Japan and, particularly, in the US. This leads to the conclusion that soaring unemployment, especially of low-skilled labour, is the price that Europe has to pay for insufficient relative wage flexibility.

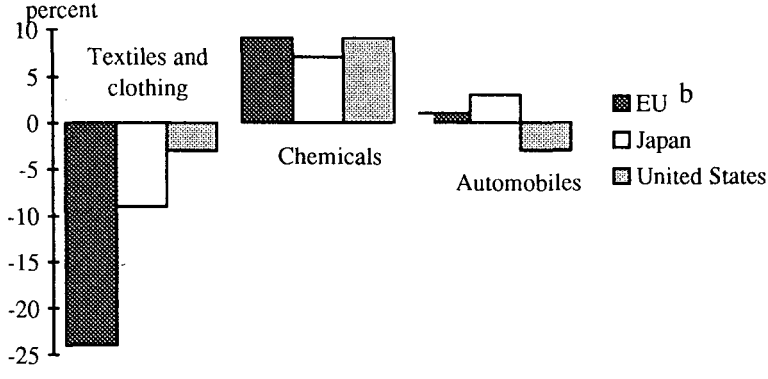
Changes in the structure of employment in manufacturing further support the proposition that European wage policies were inappropriate to deal with competitive challenges (Figure 5). The EU experienced a drastic cut in employment in textiles and clothing. This contrasts sharply with the US, where the increase in wage dispersion helped to secure employment in textiles and clothing. At the same time, employment creation in skill intensive industries (of which automobiles are an example) remained small in the EU as compared to Japan.

[17] The UK is a notable exception in this respect. This is consistent with long-term unemployment in the UK being rather low by European standards (Figure 3).



[a] Ratios of the upper and lower deciles of the earnings distribution relative to the mean; 1979=100.
[b] 1981 = 100.
[c] Males only.
[d] 1979 compared to 1987.
Source: OECD [b].

Figure 4: Trends in Earnings Dispersion,[a] 1979-1990



[a] Percentage change relative to total employment in manufacturing industries; ISIC cate-gories.
[b] France and Germany only.
Source: OECD [b].

Figure 5: Changing Patterns of Employment in Manufacturing in the Triad, 1985-1992[a]

Although the observed labour market outcomes are in line with an increasing globalisation of markets and production, one has to concede that other explanations such as an exogenous labour saving technical progress are also compatible with the empirical facts. What distingui-

shes the globalisation hypothesis from other possible hypotheses is the predicted change in relative prices, as Figure 2 has made clear. The critical question is, thus, whether the relative price of low-skilled labour intensive goods has declined or not. Acknowledging that it is extremely difficult to identify uniformly human or physical capital intensive sectors, we look at the relative price of clothing, which clearly is a low-skilled labour intensive sector. Then, a comparison with the relative prices for other sectors may provide hints on the relevance of globalisation for labour market outcomes, despite a certain degree of ambiguity that might arise as to their classification as physical or human capital intensive.

Table 6 presents changes in US producer price indexes between 1982 and 1992. Since the US constitutes a relatively large and open market, the price data can be interpreted as rough indicators of relative world market prices. The entries show that the relative price of clothing has fallen compared to the prices of goods classified as human capital intensive.[18] The evidence with respect to physical capital intensive goods is mixed. Yet, if iron and steel as well as textiles are taken to be more standardised goods than chemicals which require relatively more human capital for their production, the US data tend to support the relative price changes predicted by the Stolper-Samuelson Theorem. This tendency is not a special feature of the time period chosen, as is shown by a comparison with data taken from Lücke [1993] for 1978-1987.

All in all, there appears to be a growing gap between the need to adjust, and the capacity of OECD economies to do so [OECD, d]. As it seems, structural change in employment required by fiercer worldwide competition was handled most successfully in Japan, where employment problems were largely avoided. US labour markets have responded to increasing globalisation by remarkably flexible wage policies, while employment losses in skill intensive sectors remain a matter for concern. The EU ranks only third within the Triad in terms of successful structural adjustment.[19]

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[18] Previous studies have presented different results as to the changes in relative prices of low-skilled labour intensive goods [Leamer, 1992; Lawrence and Slaughter, 1993]. For a discussion of the results of Lawrence and Slaughter, who found no evidence for declining relative prices of low-skilled labour intensive goods, see Nunnenkamp, Gundlach, Agarwal [1994].

[19] The case of the UK suggests, however, that labour market adjustment differed significantly among EU members as well.

Table 6

US Producer Price Indexes for Selected Commodities 1992[a] (1982=100)

Product category	1992	Note: average annual growth rate 1978-1987
Human capital intensive		
Industry machinery and equipment	139.5	5.08
Transport equipment	130.4	5.50
Motor vehicles	129.9	-
Physical capital intensive		
Chemicals	125.9	4.31
Iron and steel	115.5	3.88
Textiles	117.0[b]	3.11
Labour intensive		
Clothing	122.2	3.67

[a] US commodity code. — [b] Average of code numbers 032-034.

Source: Lücke [1993]; US Department of Labor [1993].

IV. Policy options ahead

Economic policy makers are facing a major dilemma in the era of globalisation. Competitive pressures are mounting as international investors benefit from an increasing number of options to realise cost savings and to exploit profit opportunities at a worldwide scale. The implication of enterprises being less constrained in their strategic choices is that the economic autonomy of governments is shrinking; the scope of economic policy making declines. In particular, the effectiveness of traditional means to protect non-competitive factors of production is seriously eroded. The exceptionally high unemployment in the EU, especially of low-skilled workers, indicates that policy constraints are binding not only at the national level, but also at the level of large regional integration schemes. It follows that regionalisation is insufficient to meet the competitive challenges stemming from low-cost labour areas *and* advanced economies striving for technological leadership.

There appears to be a growing awareness that impaired competitiveness of EU industries and the failure to adapt satisfactorily to structural change is at the heart of labour market problems. The EU Commission's White Paper "Growth, Competitiveness, Unemployment", published in December 1993, and the OECD Jobs Study [OECD, d] both pay tribute to this emerging consensus. However, it is still highly controversial in

which way governments can contribute to reducing unemployment and regaining technological leadership.

Protectionist "innovations": A counterproductive strategy

The limited effectiveness of conventional protectionist measures has led to an increasing demand for stricter and more sophisticated protection. Examples include: trade-related investment measures (TRIMs) such as local content requirements imposed on foreign investors,[20] and a multilateral harmonisation of production standards (e. g. with respect to social and ecological production conditions):

— TRIMs may render the globalisation of foreign competitors more difficult and costly. However, the experience with fairly restrictive local content requirements in the case of FDI of Japanese car manufacturers in the EU indicates that TRIMs cannot halt the trend towards globalisation. Rather, they may induce follow-up FDI by foreign input suppliers. Even if the restrictions imposed on FDI were prohibitive, evasion would be possible by referring to non-equity arrangements such as licensing, cooperation agreements, R & D partnerships, etc.

— Common production standards may impede the process of catching up of lower income countries, if DCs are required to adhere to the more demanding social and ecological standards of industrialised economies. This may ease the adjustment burden of ailing industries for a while, but only at the cost of technologically more advanced industries. The latter will suffer from lower demand for their products in newly emerging markets and from upgrading of DC exports, if locational characteristics are denied their role in shaping the international division of labour.

In summary, innovative protectionist measures resemble more traditional means: They lead to allocative inefficiency and structural rigidity in the protected EU economies, while the incentives to increase productivity through technological innovation are weakened.

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[20] In addition, the so-called screwdriver plant legislation of 1987 provides a means to impose anti-dumping measures on products assembled in the EU, too, if imports of those products are already subject to such measures and if the share of parts supplied by the country concerned accounts for at least 60 percent of the total component value.

Industrial policy: High costs, uncertain returns

EU governments are inclined to tackle unemployment and insufficient innovativeness by selective industrial policies. The drawbacks of high and persistent subsidies granted to ailing industries are similar to those mentioned in the context of protectionism: Non-favoured sectors have to pay the bill; their competitiveness deteriorates due to higher input prices and / or rising taxes. These costs should no longer be ignored.

The more recent experience with industrial targeting at high-tech industries is not encouraging either. Typically, huge fiscal outlays failed to produce a significantly improved world market performance of the promoted EU industries.[21] This suggests that the underlying assumption, namely that technological leadership of Japanese competitors is because they enjoy the advantages of an unlevel playing field, is not valid. Japanese companies have rather been the better players. In any case, EU policy makers would be badly advised to pursue a strategy of picking the winners. Such an attempt is inherently flawed for various reasons: Governments face serious constraints in identifying future growth industries; the targeting of support schemes becomes increasingly difficult under conditions of globalised production; lobbying by large companies is encouraged, while small innovative enterprises will typically suffer from discrimination; and, finally, retaliation by foreign trading partners is highly likely.

Wage flexibility: Buying time efficiently

What can EU policy makers do about unemployment if trade and industrial policy interventions are counterproductive? In the short run, there is no alternative but to accept that the trade-off between employment and wages has become much more pronounced in the era of globalisation. The employment chances of low-skilled workers improve considerably if relative wages are flexible enough, which is evident from the US example in particular. Of course, it is mainly the trade unions in the EU which have to agree to higher wage flexibility and more wage differentiation. However, EU governments have a major role to play in order to overcome incentive problems that have characterised wage bargaining in the past:

[21] For a more detailed discussion of this issue, see Nunnenkamp, Gundlach, Agarwal [1994]. Examples of the considerable costs and limited effectiveness of strategically motivated support of technologically advanced industries in the EU include: the aircraft industry, the production of semi-conductors, and the high-definition TV system.

— Generous unemployment benefits need to be revised to the extent that they provide strong disincentives to accept lower paid job offers.

— EU governments must be credibly committed not to make up for adverse employment effects of collective wage agreements.

Flexible wage policies would help to ease employment problems in EU industries under heavy competitive pressure. They cannot halt globalisation and the ensuing devaluation of low-skilled labour in EU economies, but they provide a cushion until a long-term strategy becomes effective.

Human capital formation: The long-term therapy

From low-skilled labour being the major problem, it follows that a long-term strategy of tackling the causes of impaired competitiveness must focus on human capital formation. EU economies have to strengthen their comparative advantage in skill intensive sectors by improving the qualification of the workforce. As globalisation implies a permanent change of job requirements, human capital has to be built in a way that allows for flexibility and mobility of the workforce. Various measures may help in this respect:

— The curricula of schools and universities have to be reviewed in cooperation with the business sector, in order to narrow the gap between the skills supplied and those required in labour markets.

— Government outlays should be concentrated on basic education, the social returns to which are particularly high according to empirical estimates [Psacharopoulos, 1993].

— The existing systems of vocational training, including the widely admired German apprenticeship system, may need major revisions, as the life-cycle of vocational skills is shortened with proceeding globalisation. Reforms should aim at an increasing supply of flexible generalists, rather than narrow specialists.

Specific training may be largely left to the market. However, there is reason for governments to support human capital formation. A bigger stock of skilled labour delivers social benefits in terms of greater flexibility in responding to economic change. However, reforming the system of education and training takes considerable time to strengthen the competitive position of EU economies in skill intensive sectors. It is exactly because of these time lags that reforms should no longer be postponed.

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Abstract

The European Union in the Era of Globalisation
Competitive Challenges, Structural Unemployment, and Policy Responses

By Erich Gundlach and Peter Nunnenkamp

Competitive pressures for EU industries have mounted because the international division of labour through trade has been complemented by corporate globalisation strategies. The EU is shown to have dealt with this challenge less successfully than the other two members of the Triad. So far, it has been largely ignored that globalisation implies a closer integration of international labour markets, and hence an increased supply of low-skilled labour. The effectiveness of traditional means to protect low-skilled workers being seriously eroded, alternative policy options are discussed to restore competitiveness and reduce unemployment.

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