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## Adjustment to changing international conditions

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relations. Moreover, it would presumably be possible to identify developments apt to lead to crises in the partner country at an earlier point in time.

### Conclusions

At the bilateral level relations with key countries – the most important group of countries for the solution of international economic problems – should be further extended and improved. At the centre of interest should be the problems of the industrial development of the key countries and the gradual adjustment of industrial structures in the OECD countries with a view to the avoidance of trade-policy conflicts.

At the interregional level the danger of a counterproductive rivalry among the EC countries for advantages from cooperation with key countries should be contained by a gradual communalisation of the EC countries' cooperation policy. Simultaneously the EC, by intensifying its relations with the regional associations in the Third World, would have to strengthen their conflict-easing function for international economic stability.

At the same time the multilateral level continues to be important in the North-South dialogue. An intensifying of cooperation at the other levels may well result in an easing of pressure at the multilateral level and in a concentration on essential problems concerning all industrialised and developing countries to an equal degree. This applies above all to global environmental and resource management which, according to the latest findings<sup>11</sup>, must be intensified if the incipient disastrous trend of development is to be halted.

Finally, a cooperation strategy would have to be provided with domestic backing in the industrialised countries by way of the arousing or improving of the understanding of international economic considerations and for the justified demands of the developing countries. Only thus can the domestic political consensus which is indispensable for a smooth adjustment process be preserved. Admittedly such consensus could only be achieved if the financial strength of the OPEC countries were to be involved in a world-wide development programme.

<sup>11</sup> Cf. G. O. Barney et al., op. cit.

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## STRUCTURAL POLICY

# Adjustment to Changing International Conditions

by Heiko Körner, Darmstadt\*

**The structural changes in the world economy have made themselves increasingly felt in the Federal Republic of Germany over the past few years. For the first time since 1965 there is again a current account deficit, since merchandise trade is no longer able, due to the worsened terms of trade, to finance the traditional deficits on services and transfers. What policy should the Federal Government follow in order to help German industry adjust to these changes?**

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**T**he worsening of West Germany's external position is due to the fact that oil and raw materials producing countries have, since the early seventies, been making increasing demands on the national product of the consumer countries and have moreover, through increasing prices, succeeded in getting these demands met. In consequence the scope for distribution of the national product in the Federal Republic has diminished. With unchanged demand on

the part of the major domestic groups this leads to a diminution of the Federal Republic's monetary competitiveness. As a result, the West German economy's indebtedness to foreign countries is growing.

This would give no cause for alarm if one could be sure that, in the course of time, the allocation of domestic resources would adjust to the new international conditions of competition without appreciable difficulties. All that would be needed in that

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case would be a stabilisation policy to support such adjustment processes, in the sense that the transition to the now necessary lower absorption level and the consequential changes in the pattern of demand would receive monetary backing.

It is, however, obvious that the adjustment of the West German production pattern is by no means proceeding without problems: neither the pattern of factor inputs nor the range of products on offer has as yet changed on the required scale in favour of strongly competitive activities. Since, however, certain industries abroad – for instance in Japan and the USA – have been quicker to adjust to the changing data of the international economy and since, moreover, new highly productive industries have come into being in the semi-industrialised countries of East Asia, Latin America and southern Europe many West German industries today are finding themselves under intensified pressure to adjust.

The changes in their share of the domestic market of certain capital and consumer goods industries in the Federal Republic suggest the magnitude of the structural pressure to adjust to which many West German industries are exposed because of the

structural changes in the international economy. Table 1 shows that between 1970 and 1978 all branches of manufacturing taken together lost a market share of about 3 % to foreign sellers. Some branches indeed suffered very much greater market losses. This applies in particular, among the capital goods industries, to electrical engineering, to the precision and optical instruments and watches and clocks industries, to metal processing as well as to office equipment and data processing machinery; among the consumer goods industries it applies to fine ceramics, musical instruments, sports and leisure equipment, leather and leather goods, footwear, textiles and clothing. The collapse of market shares in the leather and textiles branches is downright "dramatic", with the loss of domestic market shares often being three times the average figure for the consumer goods industry as a whole.

This picture is matched by the trade-induced development of the total manhours worked in the industries under review. Table 2 shows that between 1970 and 1976 industries which suffered above-average losses of their domestic market shares also recorded high negative net employment effects: overall

**Table 1**  
**Share of Imports in the Domestic Market of Selected Branches of West German Industry, 1970 and 1978**  
(in %)

	Imports from			
	Western Industrialised Countries		Developing Countries	
	1970	1978	1970	1978
<b>Capital goods industry</b>	<b>14.07</b>	<b>17.08</b>	<b>0.24</b>	<b>1.07</b>
of which:				
Steel and light alloy construction	3.38	4.98	0.05	0.04
Mechanical engineering	14.73	16.19	0.19	0.41
Road vehicles	15.85	15.93	0.11	0.92
Electrical engineering	12.11	16.42	0.39	1.31
Precision & optical instruments, clocks & watches	23.00	26.75	0.30	1.74
Ferrous metals & metal goods	8.43	13.22	0.19	1.07
Office and data processing machinery	46.63	51.69	0.50	2.00
<b>Consumer goods industry</b>	<b>12.66</b>	<b>16.57</b>	<b>2.03</b>	<b>5.49</b>
of which:				
Fine ceramics	16.22	32.15	0.25	2.67
Glass	13.61	16.28	0.08	0.73
Wood processing	4.28	8.26	0.76	1.27
Musical instruments, sports articles & toys	30.70	26.47	5.21	9.22
Leather production	29.92	41.36	7.19	11.30
Leather processing	16.69	26.89	1.92	8.03
Footwear	19.20	30.67	1.46	5.92
Textiles	19.57	25.22	2.57	8.87
Clothing	10.39	15.73	3.22	13.79
<b>Food, beverages, tobacco</b>	<b>8.49</b>	<b>9.99</b>	<b>2.88</b>	<b>2.40</b>

Sources: Statistisches Bundesamt: Fachserie G, Reihe 7, Sonderbeiträge, 1970; ibid.: Fachserie 7, Reihe 7, 1978; ibid.: Fachserie D, Reihe 1.1, December 1970; ibid.: Fachserie 4, Reihe 4.1.1, 1978; author's own calculations.

more jobs were destroyed in these industries by import competition than new ones were created through the expansion of exports. The consumer goods industry as a whole shows an overall negative net employment effect in its trade with the developing countries. The positive net employment effects – predominantly from trade in capital goods – were thereby offset to over one-fifth. With a mere 0.3 million additional jobs in industry as a whole foreign trade during the period under review provided too few employment opportunities to get anywhere near compensating for the loss of jobs (totalling approximately 2.1 million) resulting from advances in productivity.<sup>1</sup>

It is a striking fact that the industries which suffered a reduction of their share of the domestic market and their total manhours worked were chiefly those which –

<sup>1</sup> Cf. K.-W. Schatz, F. Wolter: Internationale Arbeitsteilung mit Entwicklungsländern und strukturelle Anpassungsprozesse in den Industrieländern – Der Fall der westdeutschen Wirtschaft (The International Division of Labour with Developing Countries and Structural Adjustment in the Industrial Countries – The Case of the West German Economy), in: S. Börner (ed.): Produktionsverlagerung und industrieller Strukturwandel, Bern 1980, pp. 97 ff., esp. pp. 114 f. (Table 6).

compared with the average for manufacturing industry – operate with conventional technology and in consequence employ a lot of simple real capital but little qualified labour and little investment in training. This is clearly shown by the data in Table 3: with the exception of the office machines industry both the threatened branches in the capital goods industries and the hard-pressed consumer goods industries record below-average human capital intensities and expenditure on research and development.

Thus these problem industries find themselves under attack from two sides: on the one hand they are threatened by the industries of the developing countries which operate with similar production standards and factor input ratios at a lower cost level; on the other they are threatened by competition from the industrialised countries wherever a foreign country has been able to achieve more rapid and better advances in production at a similarly high level of costs through a greater input of human capital and advanced technology. Alongside the consumer goods industries, certain low-innovation

**Table 2**  
**Trade-induced Net Employment Effects in Selected Sectors of West German Industry, 1970-1976**  
(1,000 employees)

		Trade with		
		Western Industrialised Countries	Market-economy Developing Countries	Countries with Centrally Planned Economies
<b>Basic industry</b>	<b>23.8</b>		<b>23.7</b>	<b>16.5</b>
<b>Capital goods industry</b>	<b>1.0</b>		<b>199.7</b>	<b>64.8</b>
of which:				
Steel & light alloy construction		0.1	12.6	3.2
Mechanical engineering		4.0	80.8	46.8
Road vehicles		9.5	40.4	6.9
Electrical engineering		3.8	38.4	7.8
Precision & optical instruments, clocks & watches		-15.2	1.0	1.5
Ferrous metals, metal goods		-12.9	-0.3	-6.2
Office and data processing machinery		-17.0	-2.3	1.0
<b>Consumer goods industry</b>	<b>18.3</b>		<b>-48.0</b>	<b>-6.3</b>
of which:				
Ceramics		-10.7	-0.5	0.4
Glass		-1.9	0.2	-0.6
Wood processing		7.0	1.9	-1.9
Musical instruments, sports articles & toys		4.5	-3.7	-1.0
Leather production		-1.5	-0.3	-0.03
Leather processing		-2.4	-3.3	-0.6
Footwear		-12.0	-1.7	-1.1
Textiles		22.5	-10.4	3.8
Clothing		-0.6	-40.0	-9.3
<b>Food, beverages, tobacco</b>	<b>-0.8</b>		<b>3.9</b>	<b>-0.8</b>
<b>Industry, total</b>	<b>42.3</b>		<b>179.3</b>	<b>74.2</b>

Source: K.-W. Schatz, F. Wolter: Internationale Arbeitsteilung mit Entwicklungsländern und strukturelle Anpassungserfordernisse in den Industrieländern – Der Fall der westdeutschen Wirtschaft (The International Division of Labour with Developing Countries and Structural Adjustment Requirements in the Industrial Countries – The Case of the West German Economy), in: S. Börner (ed.): Produktionsverlagerung und industrieller Strukturwandel, Bern 1980, p. 118 f., Table 7.

branches of the capital goods industry are also finding themselves under increasing pressure to adjust from this quarter.

### Governmental Structural Policy

At the enterprise level the necessary adjustment can only be set in motion either by using new process technologies involving a change of the factor input ratio and/or by product innovations in the direction of "intelligent" products with a high technological value in use. This task, however, often places excessive demands on private initiative in the present economic circumstances. For one thing, the necessary adjustments become more costly and hence more risk-intensive with increasing size of the enterprise and increasingly complex connections between technology, research and development. For another, changes in factor input often imply external (i. e. economic and social) adjustments in the regional vicinity of an enterprise, involving costs which cannot be borne by the individual enterprise.

Government structural policy has therefore repeatedly tried to provide cover for such processes of adjustment when large plants and regionally predominant firms were concerned. But clearly these efforts have not proved very successful in the Federal Republic.<sup>2</sup> Admittedly, in conformity with the Federal

Government's programmatic commitment to a growth-oriented structural policy, the proportion of so-called adjustment and productivity subsidies in the (increasing) total volume of financial benefits granted to industry has increased since the beginning of the seventies. It seems, however, that the expressed intention – judging by the classification of the subsidy reports – does not conform to the reality.

This impression is based on several facts. Many of the industries under pressure to adjust (e. g. office machinery, timber and textiles) are promoted by means of financial aid (subsidies, investment bonuses). Unlike tax benefits and interest subsidies, which are directly or indirectly profit-related, financial aid is in fact related only to the act of investment but not to the quality of the recipient's own economic performance. Experience also shows that it tends to favour the employment of real capital with conventional technology. This is especially true where, within the framework of regional employment programmes, the allocation of subsidies is linked to the creation of new jobs without quality requirements.

<sup>2</sup> For this and the following cf. H. Körner, K.-H. Grünewald, J. Plathottathill: Industrielle Arbeitsteilung zwischen Industrie- und Entwicklungsländern und Strukturanpassung (The Industrial Division of Labour between Industrial and Developing Countries and Structural Adjustment), Munich 1981, pp. 24 ff.

**Table 3**  
**Human Capital Intensity and Expenditure on Research and Development in Selected Sectors of West Germany's Manufacturing Industry**

	Human capital 1978 <sup>1</sup>		Expenditure on research and development in % of turnover <sup>2</sup>
	per person employed (DM)	per manhour (DM)	
<b>Industry, total</b>	<b>109,715</b>	<b>63.42</b>	<b>3.09</b>
<b>Capital goods industry, total</b>	<b>121,922</b>	<b>71.38</b>	<b>...</b>
of which:			
Mechanical engineering	121,415	68.67	2.71
Road vehicles	131,625	79.15	2.50
Electrical engineering	119,355	72.38	7.31
Precision & optical instruments, clocks & watches	100,428	58.73	5.03
Office and data processing machinery	192,690	114.83	...
<b>Consumer goods industry, total</b>	<b>71,504</b>	<b>41.81</b>	<b>...</b>
of which			
Wood processing	81,074	44.55	0.45 <sup>3</sup>
Musical instruments, sports articles & toys	66,002	39.19	} 0.46
Leather production	58,090	34.89	
Textiles	70,574	42.07	
Clothing	27,401	17.35	

<sup>1</sup> Source: R. Krengel et al.: Produktionsvolumen und -potential: Produktionsfaktoren des Bergbaus und des Verarbeitenden Gewerbes in der Bundesrepublik Deutschland (Volume of, and Capacity for, Production: Factors of Production in Mining and Manufacturing in the Federal Republic of Germany), Series 22, Berlin 1981; own calculations.

<sup>2</sup> Source: Institut für Weltwirtschaft an der Universität Kiel (ed.): Analyse der strukturellen Entwicklung der deutschen Wirtschaft (Analysis of the Structural Development of the German Economy), Kiel 1979, p. 129 (Tab. 5-3).

<sup>3</sup> Inclusive of paper and printing.

Relatively small promotional subsidies have gone to support research and development: the average for manufacturing industry in 1974 was 12 % of all financial aid in terms of value. Promotional subsidies were divided very unevenly among individual industries: above-average amounts went to electrical engineering, precision and optical instruments and watches and clocks, as well as to mechanical engineering. The problem, low-productivity, consumer goods industries, on the other hand, went empty-handed. Research and development in these industries received no subsidies either from Federal Government funds or from any other sources<sup>3</sup> – with the exception of minimal amounts directed into textiles. One is therefore led to conclude that the overwhelming part of all financial aid favoured the preservation of existing structures instead of triggering adjustments as intended.

#### **Foreign Trade-oriented Structural Policy**

A structural policy geared to foreign trade should, however, increase the adaptability of problem industries by promoting technological and innovatory capacities, by rewarding economically profitable projects for reorganisation and by helping to run down any production that has ceased to be competitive. It is obvious that such a policy can also meet the interests of the "Third World" by supporting the relocation of conventional consumer goods industries and by simultaneously opening up new markets.

The model of such a structural policy can be found in Japan. There, on the one hand, the technological

<sup>3</sup> Cf. K.-W. S c h a t z : Internationale Arbeitsteilung und inländische Beschäftigung (The International Division of Labour and Domestic Employment), in: G. B o m b a c h et al. (eds.): Neuere Entwicklungen in der Beschäftigungstheorie und -politik, Tübingen 1979, pp. 321 ff., esp. pp. 355 ff. (Table A 5).

development in a broad spectrum of growth industries is supported directly and intensively, predominantly by the granting of loans related to a firm's own performance. On the other hand, the restructuring, relocation or liquidation of uncompetitive enterprises, especially in small and medium-sized industries, is supported. These latter are specifically encouraged to seek new locations in Asian developing countries while the workers thereby released are – if possible – absorbed in the new growth industries.

Clearly there was an early realisation in Japan that the inherited structure of export-oriented small and medium-sized enterprises was not internationally competitive in the long run. In conjunction with tariff preferences for products from developing countries the production advantages of the Asian low-wage countries were utilised, through the relocation of Japanese industries, in favour of the country's own modernisation strategy: the purchase of consumer goods and industrial inputs not only tends to stabilise the general level of costs, but also releases domestic resources for employment in modern competitive industries. This undoubtedly is one of the reasons for Japan's success in exporting its manufactures.

#### **Mobilisation of Innovatory Capacities**

West German structural policy should absorb these lessons and base itself predominantly on the mobilisation of innovatory capacities. In this it can follow two strategies: if the adjustment problems for the enterprises concerned are marginal, because the necessary changes proceed step by small step over prolonged periods of time and because no appreciable

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external costs are to be expected, then policy may confine itself to facilitating access to the necessary technologies and information and to mitigating the financial risk resulting to the enterprise from these changes.

If, on the other hand, the adjustment problems are more serious and if they entail appreciable external costs then a strategy of direct adjustment promotion would seem appropriate: the necessary changes are to be achieved by structural-policy intervention, aiming at the running down or relocation abroad of problem industries while at the same time promoting the development of advanced industries. In addition, the regional and social problems associated with reorganisation should be alleviated, during a transitional period, by appropriate compensation to the population groups affected. There should, however, be a general rule that this strategy is set in motion only if it can be shown that the general adjustment support is inadequate to meet the restructuring requirements.

The success of these adjustment strategies will depend, on the one hand, on the information base and also, on the other, on the kind of instruments employed. Adjustment policy should not react to problems in the way traditional structural policy often did. Instead it should help to ensure that readjustments are embarked upon in good time. That is why it must be based on up-to-date information on market trends at home and abroad as well as on the latest process and product innovations. Nowadays there is no shortage of such information: commercial economic research as well as market and structural reporting by official national and international organisations provide almost a surfeit of analyses and forecasts.

True, the evaluation of this material presents difficulties for the authorities concerned and for the entrepreneurs potentially affected. Thus it would seem necessary to set up a consultancy system which – organised on as decentralised a basis as possible – would be accessible to small and medium-sized enterprises and which would enable them to set in motion whatever adjustments might be necessary with an appropriate time advantage. This individual consultancy on innovations and marketing could moreover close the gap which exists between the information relating to the average figures for an entire branch of industry and the informational needs at the enterprise level: if an industry is regarded as uncompetitive on the strength of the available indicators this does not necessarily mean that individual enterprises of that industry do not possess a

mobilisable development potential which might be utilised, given the appropriate initiative.

An adjustment policy geared to foreign trade is no replacement for entrepreneurial initiative since no state body can foresee which entrepreneur will prove successful in which market and in what way. It should, however, support promising entrepreneurial adjustment plans by the employment of appropriate instruments. That is why, within the framework of adjustment policy, only such financial benefits should be provided as are linked to the intended success of the enterprise: aid with the servicing of debts, interest subsidies and profit-related tax benefits (tax deductions and special depreciation allowances) should be given preference over investment subsidies. More particularly the instrument of tax-free investment grants, which is at present being used as the basic instrument of structural policy, should be critically re-examined from this point of view since this form of support takes no account of the profit situation.

### **Appropriate Instruments**

If the adjustment problems are of a more serious nature – such as the reorganisation of uncompetitive but regionally dominant industries in peripheral economic areas – enterprise-related “lightweight intervention” will hardly be sufficient to compensate the large circle of persons affected for the burdens caused by the reorganisation. In this kind of situation, in addition to aid for the establishment of new competitive industries, consideration should be given to the provision of mobility grants for the redundant employees and – in extreme cases – to “shipbreaking premiums” for the capital owners affected. The welfare losses of particularly affected problem groups might moreover be offset by temporary retraining and employment programmes under the direct management of the state.

Programmes of this kind admittedly have the flaw of not directly contributing to the raising of industrial competitiveness. They are justified solely by the fact that they make the necessary adjustments socially bearable. Naturally they must not assume the character of costly preservative actions. That is why they should have a time limit attached to them from the outset and why the instruments to be employed should be accurately specified. That such measures can also promote readiness to readjust is obvious. After all, the frequently deplored reluctance to economic and social change is very often no more than the result of a lack of information on both the risks and also the opportunities of the innovations envisaged.