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Employment effects of multinational enterprises:

A survey of relevant studies
relating to the Federal Republic of Germany

by

Paul J. Bailey,
Universität München

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EMPLOYMENT EFFECTS OF MULTINATIONAL ENTERPRISES:
A SURVEY OF RELEVANT STUDIES FOR THE FEDERAL REPUBLIC OF GERMANY
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Introduction

The structure of the labour force in the manufacturing industry of the Federal Republic of Germany has undergone several changes in the past few years. Since multinational enterprises tend to be concentrated in the manufacturing industry the question of interest in the context of this present paper is the extent to which multinational enterprises can be isolated as a separately identifiable variable in the process of change in employment level and structure. One relevant consideration in this endeavour is the comparative performance of multinational and other enterprises. Another hypothetical consideration is related to the question of how different the German¹ employment level and structure would appear without the multinational enterprises. For both considerations it would ideally be necessary to determine how many jobs have been created by MNEs, directly and indirectly, how many persons displaced, or how many work places preserved as a result of intra-company trade and increased co-operation with developing countries; and last but not least, how many jobs have been exported through the switching of production facilities to low wage manufacturing areas.

This present paper attempts to shed some light on these issues through reviewing and evaluating recent relevant studies available for the Federal Republic of Germany, which are unfortunately relatively scarce and in part contribute more to outlining the arguments of the controversy than providing answers which would lead to consensus on the matter under consideration. This is partially attributable to the fact that their main concern is usually something else, with the employment contributions of MNEs only being treated indirectly.

Although the problem of changing industrial structure and related employment problems in the Federal Republic of Germany have become of considerable concern to policy makers and the Federal Government has entrusted a special commission with its study, there has been relatively little research attention with regard to the actual impact of the phenomena of multinational enterprises on employment behaviour in the report of

¹ Throughout this paper it is understood that use of the terms Germany, the Federal Government/Ministry/Republic, or German refer to the Federal Republic of Germany.

this commission or in other studies. The commission, while dealing with structural policy, unemployment, external trade and private investment, etc., limited itself to referring to the multinationals exclusively within the context of competition policy.¹

Significantly, even a recent report on another study regarding the effects of multinational enterprises on the external trade and economic structure of the country², prepared by the HWWA-Institute³ on behalf of the Federal Economics Ministry (Hwi), failed to evaluate specifically the connected employment impact of MNEs, which was not seen even as a priority problem for future research.

For any attempt to assess the impact of MNEs on the levels and structure of employment in the Federal Republic of Germany, one is confronted with two main difficulties - first a practical and then a methodological one. The practical one revolves around the availability of data and its reliability - as was to be expected from the introductory observations. For all intents and purposes the available official statistical sources such as publications by the Federal Statistical Office, the Federal Bank or the Ministry of Economics, do not permit the larger multinationals to be singled out in particular in the data published for the various industries as far as the concerns of the present study go. The generally available information depicts the over-all amount of foreign direct investment with categories such as under 50 per cent, over 50 per cent foreign participation, etc. However, the performance of the larger multinationals cannot be deduced on this basis alone - for each specific case a special survey would be required. In fact, the difference in collection methods and definitions used by the Federal Economics Ministry and the Federal Bank have in the past led to the publication of different figures to describe the same phenomena.

¹ Wirtschaftlicher und sozialer Wandel in der Bundesrepublik Deutschland, Gutachten der Kommission für wirtschaftlichen und sozialen Wandel, Bonn, October 1976, pp. 20 and 736-9.

² Rolf Jungnickel, Henry Krägenau, Matthias Lefeld, Manfred Holthus, Barbara Erhardt, Einfluss multinationaler Unternehmen auf Aussenwirtschaft und Branchenstruktur der Bundesrepublik Deutschland, Hamburg, 1977, p. 31.

³ HWWA: Hamburger Weltwirtschaftsarchiv (Economics Research Institute).

Fortunately, a number of private studies/commissioned research reports have been published¹ utilising annual company reports, archive material, interviews, and the results of special questionnaires/surveys which have been able to make an estimate of the global dimensions of the multinational phenomena.

As regards the methodological problems they are connected with the need to isolate the behaviour and the effects of multinational enterprises from the existing network of economic relationships including international trade, economic co-operation, etc. Two main approaches suggest themselves for this purpose. First, once we have obtained separate figures (estimates) for multi-, as well as, national enterprises the impact of MNEs may be evaluated if we attempt to imagine the hypothetical situation of what the German employment market might have looked like without them (i.e. the "non-MNE hypothesis"). Clearly, it is not sufficient merely to

¹ The studies connected most directly with German multinationals include: Rolf Jungnickel, Henry Krägenau, Matthias Lefeld, Manfred Holthus, Barbara Erhardt, Einfluss multinationaler Unternehmen auf Aussenwirtschaft und Branchenstruktur der Bundesrepublik Deutschland, Hamburg, 1977, op. cit.; Rolf Jungnickel, Klaus Matthies, Rolf Sutter, Die Auslandstätigkeit der deutschen multinationalen Unternehmen, (HWWA-Report No. 31), Hamburg, 1975; Manfred Holthus, Rolf Jungnickel, Georg Koopmann, Klaus Matthies, Rolf Sutter, Die deutschen multinationalen Unternehmen, Frankfurt, 1974, and Gerd Junne et al, "Die Regionalverteilung ausländischer Investitionen in der Bundesrepublik Deutschland", DVPW-Kongress, Duisburg 1975. Among those books and articles which are important since they make a contribution as case studies are: Folker Fröbel, Jürgen Heinrichs, Otto Kreye, Die neue internationale Arbeitsteilung : Strukturelle Arbeitslosigkeit in den Industrieländern und die Industrialisierung der Entwicklungsländer, Reinbek bei Hamburg, 1977; Jürgen B. Donges and Paulgeorg Juhl, "Deutsche Privatinvestitionen im Ausland : Export von Arbeitsplätzen?", Kieler Arbeitspapiere No. 81, December 1978; Hugo Dicke, Hans H. Glismann, Ernst-Jürgen Horn, Axel D. Neu, Beschäftigungswirkungen einer verstärkten Arbeitsteilung zwischen der Bundesrepublik und den Entwicklungsländern, Tübingen, 1976, as well as the Monatsberichte der Deutschen Bundesbank (various issues).

subtract, in this exercise, the employment in multinational enterprises situated in Germany and to add on the other hand the employment in the foreign subsidiaries of German-owned multinationals. With respect to the first operation it is not known whether a domestic firm would have been able to produce the goods manufactured by the MNEs. With respect to the second question it is to be remembered that a job overseas can certainly not be simply equated with a job lost at home. This would be the case only (other things being equal) if the products of the foreign subsidiaries of German MNEs could have been fully substituted through exports from Germany. In addition, the secondary effects of the activities of the foreign multinationals on employment in German-based units of the MNEs and on other enterprises in the country would need to be considered. For most of these calculations the data base available for the Federal Republic of Germany is insufficient. In addition, the "non-MNE hypothesis" is not a realistic one, at least as a global proposition.

The second method is to obtain data on the direct employment volume (and structure) of MNEs and to attempt to ascertain whether multinationals behave in employment terms in any manner different from local enterprises. If so this might be used as an indication for their particular effect on the levels and structure of employment. Undoubtedly, this method is not a very sophisticated one and neglects important economic relationships. It is, however, a simple approach by which relevant tendencies can be uncovered, and has therefore been used in the present paper.

Thus, while the figures presented here do not possess the characteristics usually expected of data generated through a uniform collection procedure - each study having different definitions, cut-off points and varying degrees of access to information - these differences alone did not impede summarising their relevant findings for this review. Moreover, the ability of the existing literature to illustrate the various facets of the problem associated with the employment effects of MNEs in Germany such as job exports, external trade, the textile and clothing industries as a special case, and the impact of increased imports from the developing countries warranted the inclusion of a number of studies in this presentation in so far as they are indicative of general trends.

Number of employees in MNEs in the Federal Republic of Germany

According to the most recent relevant research available, in 1974 approximately 1,932,500 workers were employed in the sixty-four largest multinational enterprises operating in the

manufacturing industry in the Federal Republic of Germany¹ (in this particular survey 30 were German and the rest foreign (majority) owned (see tables 1 and 2 in the annex)). This corresponds to an employment share of 24 per cent. Viewed from the perspective of foreign or domestic (majority) ownership, the same study found that the 34 foreign MNEs in the sample only employed 473,500 persons while 1,459,000 worked for the remaining 30 German-owned multinationals. Although the foreign-controlled MNEs appear thus at first sight to be somewhat dwarfed by their German counterparts with respect to their employment contribution it has been estimated that if the smaller foreign multinationals were all added to the picture the total direct employment in foreign-owned MNEs could well come to something like 1.2 million (i.e. 15 per cent of the entire manufacturing employment in the Federal Republic)².

The role of multinationals in the German economy

The importance of multinational enterprises in Germany is demonstrated also by a comparison of economic data. It has been calculated that in 1973 the 73 largest MNEs (both German-owned and other) accounted for 30 per cent of the total turnover (i.e. DM 217.5 billion of DM 723.7 billion for the entire manufacturing industry). Forty-three of these 73 multinationals were concentrated in three areas, viz. chemicals (17), electrical engineering (12) and steel, mechanical engineering and vehicles (14). Four MNEs of the latter sector were found in the automotive industry. Ten MNEs were located in the food, beverage and tobacco sector, while 7 were engaged in the petroleum manufacturing industry.³

¹ Jungnickel, et al, Einfluss multinationaler Unternehmen, op. cit., pp. 38-41.

² Ibid., p. 43. By way of comparison, utilising the data supplied by the Deutsche Bundesbank for 1972 it is even possible to revise this estimate to some 2,195,600 persons if all establishments with foreign capital participation are included, irrespective of size, or the actual participation percentage in order to obtain an employment contribution of some 13.3 per cent of the total working population of 16,532,200. "Ausländische Beteiligung an Unternehmen der Bundesrepublik", in: Monatsberichte der Deutschen Bundesbank, vol. 26, No. 11, (November 1974), pp. 28 and 30.

³ Cf. Jungnickel et al, op. cit., pp. 279-284 (cf. table 3). The practice of the authors of collapsing categories to place steel, mechanical engineering and vehicle construction into one, while necessary for presentation purposes, can be questioned.

The German-owned MNEs are concentrated mainly in the 3 first mentioned industries. Looking at the picture in proportionate terms it is found that 70 per cent of the largest 39 German multinationals are concentrated in the chemical, steel, electrical and mechanical engineering and vehicle construction industries (see table 3 in the annex).

The foreign multinationals in the Federal Republic, on the other hand, present a very different distribution pattern. They are spread more evenly throughout all sectors of the economy. They are most prominent in the petroleum industry - possessing all 7 firms in the branch - and in the food and beverage branch as well where they own 7 out of the 10 of the MNEs.

The same three sectors - chemicals, electrical engineering, steel, etc. - accounted for 68 per cent of the turnover (DM 148.9 billion) of the 73 multinationals studied, with the share of the four automobile companies alone amounting to DM 40.5 billion or 18.6 per cent of the turnover accruing to the largest MNEs (all these figures for 1973).

It can also be seen from table 3 (in the annex) that the German-owned multinationals secured nearly two-thirds of the turnover of all MNEs (i.e. DM 139.4 billion), 82 per cent of which was in the three sectors where they dispose of 70 per cent of the firms. In other words, 19 per cent of the total turnover of the manufacturing industry was concentrated in the hands of 39 German-owned MNEs operating in the Federal Republic.

Although accounting only for 10.7 per cent of the entire industrial turnover in the Federal Republic and reaching only 56 per cent of that of their German counterparts, the 34 largest foreign MNEs attain nevertheless a very significant volume of economic activity. They concentrate 34.2 per cent of their turnover in the petroleum manufacturing industry (DM 26.7 billion). This industry is followed by the steel, mechanical engineering and automotive sector with 19.2 per cent of the turnover of non-German MNEs (i.e. DM 78 billion) and the food and beverage industry with 18.2 per cent. Despite the relatively abundant number of foreign multinationals investing in the chemical industry (6), they were only able to account for 6.4 per cent of the turnover achieved by foreign MNEs. By 1974 it had been projected that the 34 largest foreign MNEs had achieved a turnover of DM 95.6 billion and if one counts the smaller foreign multinationals then a turnover of some DM 140 billion is attributable to them.¹

¹ Ibid., p. 43. Going beyond this to include all 9,960 firms with foreign capital participation (an increase of over 20 per cent since 1970) we find that they have a turnover of some DM 265 billion or approximately 20 per cent that of the entire German economy (i.e. including construction, etc., in addition to the manufacturing industry). Cf. Bundesbank (1974), op. cit., pp. 23-33.

In summary then the multinationals account for a considerable proportion of the economic activity in the sectors in which they are concentrated. MNEs are strongest in the automotive industry where their turnover share reaches 71 per cent (with German-owned MNEs achieving half of the turnover alone), followed by petroleum manufacturing (64 per cent). Here the opposite phenomena can be observed, i.e. the sector is largely dominated by foreign MNEs. The third branch in importance is the chemical industry and the fourth electrical engineering with 58 per cent and 56 per cent of the respective turnovers in their sectors being accounted for by the multinationals, most of them German. For the rest, foreign MNEs are more prominent in the food and beverage industries while German MNEs account for 17 per cent of the turnover in steel, mechanical engineering and vehicles (with the automotive industry removed from this sector for separate consideration). (See diagram 1.)

Economic penetration of MNEs over time

The presence of foreign capital investment in Germany has a long history and so have - to a somewhat lesser extent - the foreign direct investments of German multinational enterprises, particularly in the three sectors of chemicals, electronics and mechanical engineering (including vehicle construction) in which they also concentrate in the home country.

Many of the subsidiaries of foreign-controlled firms had existed in Germany since before the First World War so that even despite the foreign exchange restrictions in the thirties, followed by the Second World War, they were in a good position to participate actively in the reconstruction process and economic boom after the currency reform. German enterprises, on the other hand, got off to a slower start after the War since most of their possessions abroad had been confiscated and the shortage of capital forced them to concentrate on the home market before thinking in terms of expansion. (The exchange rate at this time also made foreign subsidiaries an expensive proposition.)

However, with the founding of the Federal Republic of Germany in 1949, and the adoption of a liberal internationally open economic policy, the way was paved for both inward and outward movements of direct investments. Since then MNEs have continued to expand in Germany. The creation of the EEC in 1958 provided new incentives for growth. Foreign-dominated firms increased in importance in Germany after that, not only through setting up new subsidiaries and enlarging existing ones, but also through "take-overs" of smaller German firms. A further impulse was provided by the first enlargement round of the EEC¹, and investment by the OPEC

¹ Bundesbank (1974), op. cit., p. 23.

countries between 1971 and 1974 which served to counteract the slowdown in foreign investment which had become noticeable for the first time towards the end of the sixties¹ when the amount coming in matched that flowing out.

Interestingly, much of the foreign investment in the Federal Republic of Germany (with a dominant role of US capital) is of relatively recent origin. Thus according to available estimates fully 75 per cent of the recent value of foreign investments in the Federal Republic (cumulative value of direct investments from 1961 to 1975) have been undertaken only since 1966 rising from DM 10.63 billion to DM 42.45 billion by 1975.² Over two-thirds of this capital was invested in the manufacturing industry (i.e. DM 31.26 billion). Of this the lion's share fell on the petroleum manufacturing industry, which received approximately 20 per cent. A similar evaluation of nearly the same volume was found for German direct investments abroad, although to give the data for the accumulated value of direct investments - as our sources do - can result in presenting a distorted picture.

Significantly, beginning with 1975, Germany was for the first time investing more abroad than was being invested in Germany by other countries. By 1976, the amount of foreign investment in the Federal Republic seemed to have levelled off at DM 63 billion, with German investment overseas reaching DM 43 billion and continuing to rise (in fact by 1978 it had reached DM 58 billion).³ (Again, the data presented above represents aggregate values and does not permit the larger "multinationals" to be singled out.)

Thus, the ever increasing tendency of German firms to invest overseas stands in sharp contrast to the steady decline of foreign direct investment in the Federal Republic. Whereas foreign investment in Germany between 1972 and 1974 amounted to over DM 18 billion, foreign capital entering the

¹ "Stand der Direktinvestitionen Ende 1976 - Erste Ergebnisse einer neuen Statistik über die deutschen Direktinvestitionen im Ausland und die ausländischen Direktinvestitionen in der Bundesrepublik Deutschland", Monatsberichte der Deutschen Bundesbank, vol. 31, No. 4, April 1979, pp. 26-27.

² Jungnickel, op. cit., pp. 24-26 and p. 410; Deutsche Bundesbank (November 1974), op. cit., p. 23.

³ Bundesbank (April 1979), op. cit., pp. 26-27 and Die Zeit, 13 July 1979, p. 17.

Federal Republic from 1975 to 1977 only reached a total of DM 10 billion.¹ Most responsible for this reversal was the United States (investing less than half as much during the second reporting period), followed by the Netherlands and Great Britain (which together account for over 25 per cent of all foreign investment in Germany, a percentage equal to the contribution of the United States).

The same reasons making Germany less attractive for foreign investors (inter alia, the relationship of the DM to the dollar, higher wages, etc.) also explains German direct investment patterns. The Common Market's share of German investment fell from 40 to 34 per cent between 1972 and 1977, while the proportion invested in the United States rose from 12 to 28 per cent, representing an increase from only DM 1.3 billion during 1972-74, to DM 3.8 billion between 1975 and 1977. (Nevertheless the accumulated value of American investment in Germany still remained to be five times higher than German direct investment in the USA.) Significantly, the developing countries' share in German direct investment rose during the same reporting period from 11 to 18 per cent, with over half going to Brasil.

The Federal Bank in its recent reports states that perhaps certain industries in Germany have reached a saturation point not being able to absorb further foreign investment. Additionally, these foreign subsidiaries in Germany can now expand based on their own earnings in the Federal Republic without necessarily relying on capital from the parent. German multinationals on the other hand have a lot of "catching-up" to do and it is therefore thought that German foreign direct investment will continue to increase.²

The changing structure of the German manufacturing industry

One attempt has been made at endeavouring to assess the shifting importance of various industries over time. Using the criteria of "net production values", a decline in importance between 1966 and 1973 was registered in the steel, mechanical engineering, vehicle construction, leather goods and clothing industry together with the food and beverages. In contrast, the chemical and electrical engineering branches, rubber, plastics and asbestos manufacturing increased their relative production share in the manufacturing industry during this time. The share of wood, paper and printing, precision

¹ "Umschwung in der Bilanz der Direktinvestitionen", Monatsberichte der Deutschen Bundesbank, vol. 30, No. 10, October 1978, p. 35.

² Ibid., pp. 35-36

engineering, optical and iron, and sheet and metal goods industries, petroleum processing and ferrous and non-ferrous metals production remained relatively unchanged.¹

Turning more specifically to the question of changes in over-all levels of employment in various sectors of the German economy, the following picture presents itself. On the one hand the mining, iron and textile branches showed the sharpest decreases since 1962 (by 1972 a net loss of 438,000 jobs) while, on the other, the number of workers in the chemical industry, mechanical and electrical engineering sectors and the automotive branch have continued to increase most steadily over the same ten year period, i.e. between 1962 and 1972 - an employment increase of 493,000 positions was registered.²

A substantial proportion of MNEs are found in some of these industries (cf. chemicals, electrical and mechanical engineering, and the automotive industry, etc.), with, for example, one of the sharpest declines in employment being recorded in the steel industry (in which few foreign multinationals are present). The question raised, then, but not easily answered with regard to the extent of the MNEs' influence on these sectors is whether the multinationals have a causal role in this shift of importance, or, whether they have merely chosen to invest primarily in the profitable "growth sectors" of the economy. While one of the reviewed studies³ attributes a positive influence to the multinationals with respect to the structural changes in the manufacturing industry (in terms of net production) it neglects, in this context, to calculate the more interesting question for this inquiry of the correlation between these structural shifts in importance and the employment effect of MNEs.

The employment effects of MNEs

According to one available estimate based on a sample of 56 MNEs, 1,584,000 persons were employed by multinationals in the manufacturing industry in 1966 while this figure increased to 1,881,000 in 1973.⁴ Allowing for the fact that this sample is not an exhaustive survey and therefore underrates

¹ Cf. Jungnickel, op. cit., pp. 273-4 and Mathias Lefeld, Manfred Holthus, "Multinationals and Structural Changes", in Intereconomics, vol. 12, Nos. 1 and 2, January-February 1977, p. 40.

² R. Sträglin, R. Pischner, R. Mehl, B. Weiser, Weiterentwicklung der Input-Output-Rechnung als Instrument der Arbeitsmarktanalyse, Nürnberg, 1976. (Bundesanstalt für Arbeit.)

³ Jungnickel, op. cit., pp. 403-406. In this connection the acceleration of employment decreases in declining industries can be positive.

⁴ Jungnickel et al., op. cit., pp. 303-305. It should be recalled that data presented do not permit complete comparability because of differences in samples. In particular figures mentioned here for 1973 based on a study of 56 MNEs are not fully comparable with data for 1974 mentioned on page 4 of this paper since they were derived from a sample of 64 MNEs.

the importance of MNEs, it can be stated that in 1966 at least 20 per cent of the German labour force in the manufacturing industry was employed by MNEs, while the same figure increased to a minimum of 23 per cent in 1973.

This increase represented 298,300 additional jobs in MNEs; i.e. in relative terms 16.2 per cent of the employment level of 1966. This increase is considerably higher than that of the manufacturing industry as a whole (which stagnated) i.e. also that of the non-multinational enterprises. This difference is even more pronounced in the individual industries. For example, while the entire chemical industry employed 6.6 per cent more workers in 1973 over 1966, MNEs in this industry employed 33.2 per cent more (i.e. an increase of 85,200) amounting to more than half of the 1966 level of employees in the branch. Interestingly, it was exclusively the German-owned MNEs to which this growth has to be attributed; the employment in foreign MNEs, as well as in the domestic firms of the sector actually decreased by 14.4 and 9.2 per cent respectively. The reverse picture prevailed in the petroleum manufacturing industry. Although the industry as a whole employed 9,730 more people in 1973 over 1966, the larger MNEs showed a drop from 24,800 to 22,000. However, the study referred to explains that most of the enterprises reporting a growth in employment are smaller multinationals and not domestic firms.

MNEs appear to have had a positive employment effect from 1966 to 1973 on the iron and non-ferrous metals industry (in comparison to the performance of the rest of the sector and considering that employment dropped by 18 per cent in exclusively domestically operating enterprises but increased by 44 per cent in MNEs). The same picture can be found for the steel, mechanical engineering and vehicle construction industry (MNEs showed an employment increase of 20 per cent during which time national firms registered an increase of 7 per cent only; in the automotive sector taken alone MNEs were able to hire 40 per cent more workers). The behaviour pattern of MNEs was not substantially different from the branch average as a whole for the electrical engineering industry (i.e. whereas national firms showed an increase of 27 per cent, MNEs were able to employ 13 per cent more). While all MNEs taken together in the food, beverage and tobacco industries were experiencing a 13 per cent employee increase, the German-owned ones taken alone were employing 29 per cent more workers as compared to only 7 per cent for the foreign multinationals operating in the Federal Republic of Germany (1966 to 1973).¹

¹ Ibid., p. 304; and pp. 384, 386, 389, 391, 392, 394, 397 and 400.

Employees abroad

For those 11 German MNEs for which adequate data is available for 1966, it was estimated that only 13.6 per cent of their employees were outside the country. In 1971 the leading 33 German-owned and headquartered MNEs employed 418,700 persons abroad (or 22.2 per cent of their total work force of 1,886,000 at that time).¹ Taking a larger enterprise sample, i.e. including the smaller multinationals in addition, the same author, Holthus,² estimated the total number employed overseas in 1971 by German multinationals as being in the vicinity of 600,000 or 7 per cent of the workers in the German manufacturing industry. This figure was much higher for certain individual industries, such as the chemical industry (20.3 per cent), electronics (15.8 per cent) and the automotive industry (10.6 per cent).

By 1974, the top 30 German-owned MNEs were employing 28 per cent of their total work force abroad, i.e. 556,000 of some 2,015,000 workers (see table 2). There is little doubt, despite the different bases for the estimates, that the employment in the foreign subsidiaries of German-owned MNEs has increased considerably more than the domestic employment of these enterprises. Using the relatively similar samples of 1971 and 1974, the increase of foreign employment of the largest German MNEs was more than 30 per cent (137,300 persons), while their domestic employment level increased by 7 per cent (128,700 persons). In absolute terms, however, for one additional domestic employment only 1.1 employment units were added to the foreign labour force.

The phenomenon of the foreign employment component of German MNEs was also dealt with in a more recent study undertaken by the Max-Planck-Institute, which covered a larger sample of 149 German enterprises operating abroad. It was found that for 1974 28 per cent of their employees (i.e. 336,151 out of a total of 1,516,379) were employed outside of Germany.³ To this figure the authors also added the number of non-Germans (i.e. the guest-workers) employed by these same firms in the Federal Republic and arrived at a total "foreign

¹ M. Holthus, R. Jungnickel, G. Koopmann, K. Matthies, R. Sutter, Die deutschen multinationalen Unternehmen, op. cit., pp. 144-145

² Ibid., p. 147.

³ Folker Fröbel, Jürgen Heinrichs, Otto Kreye, Die neue internationale Arbeitsteilung, op. cit., p. 278 reproduced as table 4 of this contribution. This figure appears, however, to include 47,386 workers indirectly associated with the MNE abroad. Without them the percentage of workers in foreign subsidiaries would only be approximately 24 per cent.

employment content" of 35.2 per cent (i.e. 533,178).¹ The German employees in the foreign subsidiaries (relatively few²) were also included for a variety of reasons - including practical ones - in the column of foreign workers.

There exists also an estimate by Fröbel, et al. for the total employment in the foreign subsidiaries and equated operations of German MNEs of 1.5 to 1.6 million persons, which is taking into consideration practically all existing German MNEs plus other enterprises which entertain production relations with foreign firms. Methodologically Fröbel, et al. start from the ratio found for their study of 149 enterprises (mentioned above) and apply it to the 602 enterprises included in their survey at the Max-Planck-Institute. However, they also add persons in enterprises which have no organic relationships with German firms but may benefit from subcontracts (both by MNEs or German enterprises without their own production facilities abroad). Furthermore, they project the data to 1975. It is clear that the Fröbel, et al. concept of the "foreign employment content" of German enterprises is much larger than the one more specifically of interest for the present study, i.e. the employment in foreign subsidiaries organically linked to a multinational enterprise. However, it must be admitted that the Fröbel concept reflects probably better the total economic interrelationships between German and foreign complementary production; and therefore can claim attention for the job effect of international economic relations of which the multinational enterprise is only one (more visible) factor.

¹ Exactly why the authors merge the guest-workers with the column on workers abroad is unclear. The unstated assumption may be that if the appropriate industries were located abroad the guest-worker problem would be solved. It seems unrealistic not to count the guest-workers as part of the German labour force. F. Wolters, however, in his study found no significant correlation between the structure of competitiveness and employment shares of foreign workers in Germany, c.f. "Adjusting to Imports from Developing Countries", in: Herbert Giersch (ed.), Reshaping the World Economic Order, Tübingen 1977, p. 117.

² In fact Fröbel et al. did calculate this factor separately. For 813 subsidiaries with 340,502 employees (in 1975) they found 6,046 Germans overseas. Additionally, these same firms employed another 8,692 non-nationals, with both categories, amounting to 4.3 per cent, excising mainly supervisory functions. Fröbel, et al. op. cit., p. 381.

For the multinational enterprises alone the Max-Planck-Institute study also evaluated the results from the larger enterprise sample used by Holthus and found that they should be corrected in an upward direction. Assuming a yearly increase of 10 per cent of foreign employment of German MNEs, and making adjustments for the small and medium-sized multinationals abroad, the researchers at the Max-Planck-Institute found that a figure in the neighbourhood of 1 million for 1971 was a more accurate tally than the original Holthus estimate.¹

It must be noted that some of the discrepancies of the various estimates are due to differences in methodology and in definitions. A case in point are the HWWA and the Max-Planck-Institute data. Whereas the former institution found in 1971 that of the employees² of 27 German MNEs overseas, 16 per cent were in EEC countries², the latter identified 32 per cent of all foreign employees as being in Community member states. One major explanation of the difference appears to lie in the definition of multinational enterprises employed. In the above-mentioned HWWA survey an enterprise was considered to be multinational if it fulfilled two out of the three following criteria: subsidiaries in five countries; foreign content of 10 per cent for production or employment;³ foreign production value of at least DM 200 million.³ The Max-Planck-Institute definition, on the other hand, was less restrictive.

The job export issue

In addition to a profile study of 149 enterprises Fröbel et al were able to include in their research the development of 87 of these same enterprises between 1961 and 1975. Here they found that the number of workers employed in the foreign subsidiaries of these enterprises increased during the reporting period five times, i.e. from 37,211 (1961) to

¹ Ibid., p. 390.

² Rolf Jungnickel, Klaus Matthies, Rolf Sutter, Die Aus-landstätigkeit der deutschen multinationalen Unternehmen (HWWA-Report No. 31), op. cit., p. 31.

³ These narrow criteria, resulting in a small number of MNEs - rather than the different years in which the surveys were taken - accounts, in the opinion of Fröbel for a non-representative sample in the HWWA report. Fröbel, op. cit., p. 283, fn.

225,016 (1974). In the same reporting period the number of Germans employed in the Federal Republic by the same firms rose by 24 per cent, i.e. from 419,604 in 1961 to 518,521 in 1974. However, the total employment in Germany in these enterprises includes guest-workers and rose from 432,641 (for 1961) to 630,925 (1974) or by 46 per cent. While there is a considerable discrepancy between the rates of change in domestic and foreign employment, both are positive so that these data alone cannot sustain the "job export" thesis, apart from the fact that the methodological questions involved are rather complex ones. (See in this connection D. Van Den Bulcke and E. Halsberghe, "Employment Effects of Multinational Enterprises: A Belgian Case Study", another MULTI working paper.

The Fröbel study of the Max-Planck-Institute adds, however, that between 1973 and 1976 only, the total number of people employed in the manufacturing industry decreased by roughly a million (i.e. from 8,115,000 to 7,192,000). They therefore conclude a shift of production and a net negative effect on the employment level in Germany.¹

The shortcoming of these findings, for the purposes of the present report, are moreover, that they relate to the total restructuring process, and do not isolate the phenomenon of multinational enterprises. It also does not distinguish between permanent job losses and employment shifts from manufacturing to other sectors, such as services, which have occurred during the absorption period. Despite these observations it is clear that the Fröbel et al study points to areas of structural change, which also involve the MNEs, and which because of their magnitude require special attention by social and labour policy. They also tend to underline that the multinational enterprise is only one factor in the social problematique of labour force restructuring and employment change in a dynamic internationally open and widely integrated economy. This fact is reinforced by the sectoral analysis in the Fröbel study specifically for the textile and clothing industry which is taken as a particularly important sector for the problems arising from a "new international division of labour" as the authors call it, i.e. the effects of MNEs, of subcontracting and of local industrialisation implications, on the questions of labour force restructuring and structural unemployment in the industrialised countries (for which the Federal Republic of Germany stands as an example), and the growth of industry and an industrial labour force in the developing countries.

¹ Fröbel, op. cit., pp. 391-392.

Still the controversy about job exports continues. The most recent report on the largest enterprises in the Federal Republic indicates that the top 50 were able to increase their employment by 2.5 per cent (to a total of 3,068,800 - which includes those working abroad) while total employment for 1978 in the manufacturing industry dropped by 0.6 per cent (down to 7,584,000). Once again the conclusion drawn by one of the newspapers is that the enterprises must be transferring jobs to foreign subsidiaries.¹ On the other hand the Federal Bank points out that although the developing countries only receive 20 per cent of German foreign direct investment, 40 per cent of those employed abroad in German subsidiaries were in these same countries.² Thus, relatively speaking, German foreign direct investment seems to achieve an employment effect in developing countries, which because of high labour costs could not be reached at home. An important industry in this respect is textiles and clothing, specifically dealt with in one of the reviewed studies.

Textiles and clothing

According to Fröbel et al, by 1974-75 29,500 persons were employed in the foreign subsidiaries of German textile enterprises (i.e. in units with over 25 per cent capital participation), which represented 7.5 per cent of those employed inside of Germany. This was an increase of not less than 21,500 persons since 1966, when only 1.5 per cent of the work force of the German textile MNEs was employed abroad. In the clothing industry 31,000 were employed in foreign subsidiaries in 1974-75 (or 10 per cent of the German work force in the clothing industry) as compared to 15,000 or 3.7 per cent in 1966.

The relative distribution of the foreign production capacities of West German textile and clothing enterprises was estimated by Fröbel et al as follows: 20 per cent are in EEC countries, 30-40 per cent in the other traditional industrialised countries (Austria, Sweden, Switzerland, etc.) and the rest (i.e. 50-60 per cent) in the developing countries of the Mediterranean (Tunisia, Greece and Malta), Africa (textiles) and Asia (clothing). More significantly, Fröbel et al have also calculated that the percentage of workers from developing (low-wage) countries, as compared to the total number of workers abroad in German subsidiaries has risen from approximately 25 per cent in 1966 to 45 per cent by 1974-75.

¹ Süddeutsche Zeitung, 29 August 1979, p. 23. Unfortunately this data is only presented on a world-wide basis and not broken down for Germany and abroad. For the most recent academic study on the subject see J.B. Donges and P. Juhl, "Deutsche Privat-investition im Ausland : Export von Arbeitsplätzen?", op.cit., which comes to the conclusion that jobs were not being transferred.

² Bundesbank (April 1979), op.cit., pp. 34-35.

Furthermore, although those firms with the highest turnovers tend to employ an above average number abroad than one would suspect based on their share of employment in Germany, small and medium-sized firms (i.e. from the point of view of turnover) nevertheless have a not inconsiderable proportion of those employed abroad. In fact the number of workers employed abroad by West German firms has more than doubled over the past eight or nine years, while the number of workers employed in Germany during the same period decreased by 25 per cent. In addition, to give a rough idea of the number of positions which can be considered as being transferred, half of the West German manufacturing plants abroad (with 11,000 workers) and two-thirds of the textile factories (with 18,500 workers) produce exclusively for the German market. Although Fröbel et al were actually only able to identify 57,000 employees overseas, they project at least 69,000 and strongly suspect that at least some 80,000 is not an improbable estimate of the total number employed abroad by the German textile and clothing industry¹ when one includes those in firms with less than 25 per cent capital participation, those in Eastern Europe working as a result of industrial co-operation agreements, and those involved in subcontracting. The structural data collected by Fröbel show that more than 90 per cent of the employees abroad are women between 15 and 25 years of age, 43 per cent of which were younger than 20. Furthermore, most are unskilled labourers who receive on-the-job training from the enterprises.

The basic conclusion reached by Fröbel et al is that although the larger MNEs certainly have it easier when it comes to the question of relocating production facilities, the general tendency shows that, independent of their size, all German enterprises in the textile and clothing industry, whether multinational or not, when confronted with the present stage of economic development and the alternative of closure of production lines are forced to reorganise their production facilities through recourse to a greater degree of production abroad (either in the way of organic linkages - subsidiaries - or through commercial links, especially subcontracting of certain parts of their production. The low-wage advantages of either other industrialised, or the developing and state-trading countries have to be taken into account in this process.²

As mentioned above, the Fröbel et al study does not provide a specific answer to the question of employment effects of German MNEs. There is especially no treatment about what the employment figure in Germany might have looked like if less people were employed by MNEs outside of Germany. Since the methodological problems are so complicated because of the

¹ Fröbel, op.cit., pp. 122-6.

² Ibid., p. 124.

³ Ibid., p. 394.

complex international economic relationships, the study considers it impossible to generate data for the number of "exported jobs" for any individual country, based on the evidence currently available. Nevertheless, the empirical evidence does seem to point out that some of the production abroad is replacing indeed part of the manufacturing process in Germany and consequently part of the manufacturing employment. This does not necessarily mean that the jobs in question are definitely lost as there are considerable empirically documented employment switches between industries and to the service sector. For example, according to the data collected by Fröbel, the value of imported manufactured goods increased from 44.2 per cent of all imports in 1960 to 61.7 per cent in 1975 whereas the volume of imported goods from outside the EEC increased by 61 per cent between 1970 and 1975.¹

The Max-Planck-Institute researchers therefore hypothesize that with the present situation of an open market for the location of units of production the difference between national and foreign production no longer exists for the MNEs. They further point out that research to date has much neglected the fact that small and medium-sized German enterprises, whether multinational or not, play a considerable role in the foreign production process and this not only in the labour-intensive, but also in the capital investment sectors. Increasingly in their analysis not only certain product lines but complete sectors, such as electrical appliances, automobiles, machine tools and pharmaceuticals are being produced abroad for German enterprises (in addition to the more traditional ones of footwear, costume jewelry, toys, glasses and cameras).

Some factors are identified by Fröbel et al. as contributing most to the "new international division of labour". First of all, the presence of an abundant work force in low-wage countries. Secondly, the possibility to break down the manufacturing process into separate components. Thirdly, the advancements in modern communications and transport systems which make it possible to integrate separately-located production processes and permit timely delivery to the final market.² A further contributing factor may be the reduction of tariff barriers over the recent years (in GATT) which facilitate the entry of the products of the developing world into the industrialised countries.

¹ Ibid., pp.394-395.

² Ibid., p. 296.

The impact of increased imports
from developing countries

A number of studies develop scenarios with regard to the possible impact of increased imports from developing countries on levels of employment in the Federal Republic. Some aspects of this are relevant for the present paper since issues may be involved directly or indirectly related to MNEs. One study prepared by the Institut für Weltwirtschaft at the Kiel University calculates the employment consequences of such scenarios according to several different models. According to its findings¹ levels of employment in this respect in various industries might be affected by 1985 in the following manner:

<u>Industry</u>	<u>Displacements</u>	
	<u>Minimum</u>	<u>Maximum</u>
iron and steel	12,000	34,100
electronics	28,400	79,200
precision instruments and optics	9,500	26,400
office machines	8,000	22,000
leather goods	24,600	36,200
textiles	32,100	60,600
clothing	152,300	233,800
food and beverages	12,000	20,600

Additionally, the musical instruments, toys and sporting goods sector together with the leather producing industry are also expected to be under strong pressure showing a decrease of up to one-third of their employees (in terms of 1973 figures) by 1985. All in all, between 342,200 and 607,000 (7.6 per cent of those employed in 1973) workers are supposed to be "released" as a consequence of increased imports from the developing countries (especially those outside of Europe) by 1985. However, these figures do not represent absolute losses since they project at the same time that 200,900 new positions will be created in other areas as a result of increased export opportunities to the developing countries.

¹ Hugo Dicke, Hans H. Glismann, Ernest-Jürgen Horn, Axel D. Neu, Beschäftigungswirkungen einer verstärkten Arbeitsteilung zwischen der Bundesrepublik und den Entwicklungsländern, op. cit., p. 97 ff. Likewise, multinationals may pose similar problems.

Academic opinion in the Federal Republic though is not unanimous about the above findings. Fröbel et al., for example, are sceptical of the figures presented by Dicke and others at Kiel University, especially with regard to their projections about the automotive and shoe industries.¹

A more recent study², however, has projected that some 846,200 positions may become obsolete by 1985 as a result of imports from developing countries as opposed to 400,200 "gained". Assuming one unit of additional imports to replace one unit of domestic production, Wolters went to calculate the displacement effect by 1985 in terms of 1974 employment figures, as follows: leather manufacturing 73.3 per cent, clothing 65.7 per cent, precision and optical goods 35.9 per cent, footwear 31.8 per cent, electrical engineering 26.6 per cent and fine ceramics 21.2 per cent. He concluded that the marginal suppliers will be driven out in the first instance since their productivity is likely to be one-third below the branch average.

... The results of these calculations reveal that for imports from developing countries projected displacement effects can be regarded as small if compared to past technological displacement, but large if compared to past adjustment to growth of imports from developing countries. The projected average annual displacement is almost eight times as large as in the past, and attains distinctly more than half the rate as average annual displacement due to total import growth between 1962 and 1974. While it is true that the expected adjustment burden is eased considerably by the positive employment effects on increasing exports to developing countries, net displacement can be considered still large enough to call for appropriate adjustment strategies.³

While MNEs are thus not directly involved in this phenomena, the reason for mentioning them here in the present paper is also with respect to their capacity to absorb workers displaced, as a result of increased imports, in export-oriented industries, for example.

Export and job "substitution"

Definitive calculations do not exist which would present a picture of the extent to which production by foreign subsidiaries of German MNEs actually substitutes what previously would have been products exported from Germany. This is

¹ Fröbel et al, op. cit., pp. 363, 368 and 372.

² Wolters, op. cit., p. 120.

³ Ibid., p. 120.

basically the "non-MNE hypothesis" which is, as we have indicated at the outset, a very tenuous proposition. According to one estimate¹ some 40 per cent of the turnover of German subsidiaries abroad (especially of those in Europe) could be considered as falling under the heading of "export substitution" with regard to the countries in which these subsidiaries are located. Another estimate² has indicated that production abroad by subsidiaries of MNEs designated for third countries is capable of substituting up to 15-30 per cent of "hypothetical" exports from Germany. This is apparently especially true of the German-owned MNEs in the chemical industry in Belgium and Holland and German MNEs in the electronics industry.

Translating these percentages for turnovers and production into actual "jobs exported" is another, if not impossible, task because of many intervening factors. For example, it has been observed that half of the German-owned subsidiaries in the chemical industry in industrialised countries, and the majority of subsidiaries in the electronics and metal sector in the EEC, are the result of "takeovers" by German MNEs of existing foreign enterprises. Workers already in these firms can hardly be considered to be taking jobs away from Germans back home. A similar situation is found with foreign investments designed to overcome trade barriers. A product "made in Germany" is in this instance hardly a viable alternative to the one produced by a foreign subsidiary of a German MNE (i.e. no jobs are exported). Even the "offensive investments" which are not made with the prime consideration of protecting markets tend to degenerate over time taking on increasingly a defensive character (thereby substituting fewer potential exports and hence fewer hypothetically exported jobs).

Based on the assumption that exports by German parent companies to their own subsidiaries can be considered "extra", (i.e. over and above what normally would have been exported if the subsidiary had not existed,) the upper limit of their potential value is cautiously estimated at being in the vicinity of DM 22 billion, or approximately 40 per cent of all exports by German-based MNEs. This is not to say that 40 per cent of the jobs in German-based MNEs have been created or preserved as a result of intra-company trade. It merely serves as an indication of what the dimensions of the situation might be, especially in light of the above average growth rate for exports to countries in receipt of German direct investment.³ However, the most recent articles

¹ Jungnickel, op. cit., pp. 236-237.

² Ibid., pp. 232-237. The implications of the empirical evidence supplied by Jungnickel on exports are being considered in this section in relation to the question of job exports.

³ Ibid., pp. 237-240.

contained in the German press indicate that German-owned MNEs have continued to develop beyond the stage reached by 1973-75 (the cut-off point of most of the studies reviewed in this paper), (see, for example, table 5, which lists the recipients of German direct investment for 1978).

In the same vein, newspaper reports can be used to complement findings originally published by Fröbel et al. on employees in Germany and abroad in selected MNEs. Taking, for example, "Bosch", the figures can be expanded to show 75,440 employees in Germany in 1977 and 75,054 for 1978 against 33,019 and 42,700 respectively abroad during the same reporting period.¹

Foreign MNEs in Germany

Turning to the question of foreign MNEs in the Federal Republic, a major question is, what the individual sectors would have looked like if MNEs had not invested; would domestic firms have replaced them? This is hardly likely for some sectors such as in the petroleum manufacturing industry. Similarly in the food and beverage industry where a few foreign firms possess 50 per cent of the capital (book value) such an assumption appears unlikely. In the chemical industry it is a different story, though. Without foreign MNEs, such as Du Pont, powerful German multinationals, let us say Hoechst AG, would have been more than capable of stepping into the market, sooner or later. In the computer industry on the other hand, certainly no domestic firm would have been in a position to replace IBM in the last couple of years; and thus without IBM, the corresponding high technology products would have had to be imported (with proportional loss of employment in Germany).² These considerations, while to some degree speculative, are the closest that researchers have come in attempting to verify the "non-MNE hypothesis" as outlined in the theoretical considerations mentioned on pages 3 and 4 of this paper. Nevertheless, they are valuable for presenting an indication of what the alternatives in employment terms might have looked like (cf. tables 1 and 2).

¹Suddeutsche Zeitung, July 1979, p. 26.

²Jungnickel, op.cit., pp. 250-251.

A further piece of information which might be relevant in this context is a questionnaire administered by the HWWA-Institut¹ to foreign MNEs in Germany which revealed that 80 per cent believed that German investors would have behaved exactly in the same manner as they had done if they had not been there. On the other hand, in reply to a further question 60 per cent answered that it could very well be other foreign multinationals who might have replaced them rather than domestic firms. In any event such predictions considerably lessen the perceived impact of MNEs in Germany, without necessarily saying that the German-owned MNEs would have achieved the same employment effect.

MNEs: reactions and policies

As mentioned before, concern over the employment impact of MNEs and possibilities of "job exports" in relation to this is a rather recent phenomena which became articulated primarily in the last couple of years in connection with the international recession. In fact up until 1973-74 the Federal Republic of Germany had been characterised by a chronic labour shortage to such an extent that German employers in surveys gave as their principal reason for investing abroad the tight labour market at home. Consequently, the opinion prevailed that "such investments can in no way be looked at as taking away domestic jobs, they merely add jobs abroad; it is truly a positive-sum proposition".² A more critical evaluation was given in union circles³ both in public statements and in response to academic surveys. In the latter circumstance typically, however,

... union respondents ... did not identify the problem of "job exports" specifically in connection with MNEs. They saw the gradual decline of labour-intensive industries in the advanced industrialised economies as part of a universal phenomenon brought about by continual structural changes taking place in the world economy.⁴

The recent return of Germany to a situation of almost full employment, accompanied by the lowest unemployment since 1973 (in Sept. 1979 3.3 per cent of the labour force) may relegate

¹ Ibid., p. 249.

² G.B.J. Bomers, Multinational Corporations and Industrial Relations: A Comparative Study of West Germany and the Netherlands, Amsterdam, 1976, p. 111.

³ R. Jungnickel and K. Matthies, Multinationale Unternehmen und Gewerkschaften, Hamburg, 1973.

⁴ Bomers, op. cit., p. 111

questions related to "job exports" to their familiar place in Germany, i.e. to a problem of general structural change and adjustment to new economic conditions rather than one of a massive menace of permanent and irreversible employment loss.

It is not surprising therefore that the public policies do not specifically approach the question of job exports through MNEs. There are, however, very developed and elaborate considerations regarding any economic and labour force repercussions of structural change with the appointment of a commission of investigation on matters of structural economic and social change (whose report has been referred to before) as evidence of this.

It should be mentioned, however, that among the transnational factors the implications of increased imports from developing countries partly have found particular attention more in connection with the concept of a new international economic order. The sectors most endangered in this connection are located mainly in the peripheries and industrial disadvantaged regions. Alternative re-employment possibilities for workers displaced here are not likely to be easily available. Additionally, the work force in the peripheral regions lacks mobility.¹ While fostering the implantation of industry and its diversification in depressed areas, great emphasis is still given in these and other cases to an increase of labour mobility, both geographically and occupationally. This includes measures for improved retraining (programmes and institutional arrangements). Existing social and labour legislation in the Federal Republic is fairly well advanced in the fields of public adjustment policies, training, etc.², and it could be expected that adaptation to new situations might be fairly easy.

It will therefore seem that the German labour market and structural industrial policy has become and will increasingly become "anticipatory"³ rather than defensive.

One study, for example, based on the assumption that job losses will be off-set by a corresponding number of jobs "created" calls for a number of specific measures.⁴ According

¹ Dicke et al, op. cit., pp. 120 ff.

² Hans Günter and Gerhard Leminsky, "The Federal Republic of Germany", in: Labor in the Twentieth Century (New York 1978). pp. 149-196.

³ Wolters, op. cit., p. 122.

⁴ Deutsch Institut für Wirtschaftsforschung, DIW Wochenberichte 5/1977 and 1/1978; Dieter E. Louda, "Aussenhandel und Beschäftigung", Beiträge zur Arbeitsmarkt- und Berufsforschung No. 14, Nürnberg, 1976 and Heinz Werner, "World Trade and Structural Adjustments", Intereconomics, May/June 1979, pp. 122-126.

to these findings the sectoral shifts in production, resulting in the largest positive employment effects, will be in mechanical engineering (37 per cent increase), road vehicle production (24 per cent) and steel construction (8 per cent). However, vocational training will have to undergo an equal structural change in order to equip the released unskilled workers (coming from the textile sector, etc.) for the new requirements. In demand will be machinists, toolmakers and similar skills (40 per cent), metal production workers and processors (20 per cent), engineers, chemists, physicists and technologists (10 per cent) and fitters and electricians (5-7 per cent). In order to meet the professional qualifications for these export-oriented industries, 70 per cent of the displaced would require on-the-job retraining and 30 per cent would have to attend vocational/technical college courses with one-third of the latter having to obtain a university degree.

Despite the considerable public policy expenditure required for such selective and anticipatory labour market policies, cost/benefit analysis has shown that coherent perfectionated retraining programmes are still relatively inexpensive¹ as compared to the unemployment insurance benefits which have otherwise to be paid out.

New instruments for active economic and manpower policies were created between 1967 and 1969 under the impact of the earlier recession, including the Stabilisation and Growth Act, the Employment Promotion Act, the Federal Training Promotion Act, and the Vocational Education Act. The role of the Federal Institute for Labour was much enhanced by this legislation, especially in the area of vocational training. Adults are now increasingly making use of their entitlement to financial assistance from the federal institute for purposes of further training and settling in. In 1971 more than 360,000 workers received such grants. Skilled workers seem to benefit more from these efforts, in part because the schemes for unskilled workers are still unsatisfactory.²

Also to be mentioned in this context are measures by the European Community within its social action programme.³

¹ Dicke, op. cit., pp. 139-143. Additionally, use can be made of EEC financing in this respect, cf. Peter Gloystein, Finanzierung des industriellen Strukturwandels durch die EG, Hamburg, 1979.

² Günter, Leminsky, op. cit., pp. 178-179. See also Ursula Engelen-Kefer, Beschäftigungspolitik, Köln, 1976.

³ Cf. Paul J. Bailey, Möglichkeiten der Kontrolle multinationaler Konzerne : die Rolle internationaler Organisationen, München, 1979, p. 108 ff.

Conclusions

While data limitations make it impossible to obtain a detailed and completely accurate picture of the employment effects of multinational enterprises in the Federal Republic of Germany, a number of general conclusions can be derived from the analysis of available relevant literature carried out in this paper.

- 1) The operations of MNEs are an important factor in the German economy, especially in the manufacturing industry where they are one of the major structural and employment determinants, accounting for 30 per cent of the turnover and 24 per cent of employment in the mid-1970s.
- 2) MNEs seem to have contributed proportionately more in the recent years, at least up until the recession around 1974, to employment creation than the sectoral average of the industries in which they are found, as their generally increasing share in employment shows.
- 3) At the same time, however, they have certainly been a significant factor in the structural changes experienced, in both economic and manpower terms.
- 4) German-owned MNEs were found to be much more significant in terms of economic volume (two-thirds of all MNE turnover) and in terms of employment creation (1.5 million employees) than the subsidiaries of foreign-owned enterprises which nevertheless hold a substantial place in both respects (i.e. 10 per cent of the entire industrial turnover and almost 500,000 employees). Also the German-owned enterprises seem to have had higher rates of employment increase as to the studies reviewed than their foreign counterparts, significantly in the chemical and automotive industries. However, this difference may be traced to the sectoral composition of the industries, with a different enterprise structure for German and foreign-owned MNEs. Foreign subsidiaries tend to concentrate in capital intensive sectors (such as oil) with low employment effects.

5) There were (still somewhat tentative) indications that foreign MNEs may find the Federal Republic of Germany a less attractive place for investment and operations although these aspects have not yet been sufficiently researched.¹ Still the reasons for investing in Germany are becoming less obvious for foreign enterprises in view of increased comparative labour costs, relatively lower economic growth and consumer demands, trends in capital intensity of industrial production, a shift to service industries etc., especially where production in the Federal Republic of Germany was geared to exports, the foreign investor may be less inclined to choose the Federal Republic of Germany as a platform.² However, some other recent publications point to the fact that this may not be a irreversible trend.³

6) If one bases oneself on the relevant statistics contained in the studies reviewed in this paper, German-owned multinational enterprises have expanded in general more in low wage countries than in their home country, during the years 1961-1975. This seems to be true also as regards their employment expansion. However, in the overall analysis there have still been increases in their German employment level (or at least this level has been maintained). Such evidence is not compatible with the idea of large scale permanent "employment exports". At the same time, transfers of particular production lines certainly have occurred. As workers affected by such national and international structural change have usually found re-employment, MNEs seem on the whole to have been a factor more important for structural change than a factor influencing in a negative way on a longer-term basis global employment levels. It must be remembered for the overall evolution that the net reduction of the immigrant labour force between 1974 and 1978 by 447,686 workers may have been a further element facilitating restructuring without a massive disruptive impact on the labour force in the Federal Republic of Germany.

7) In the past, structural changes whatever their origin (economic technological etc.,) did not present major social problems in the Federal Republic of Germany as they happened in periods of pronounced economic growth, facilitating the restructuring of the labour force and the compensation of social costs arising from them. A rather well developed network of social and labour legislation, englobing anticipatory social policies, especially in the training and retraining field, has considerably helped the social adjustment to change.

¹While studies are not clear on this point, the most recent and accurate data supplied by the Federal Bank indicates that in 1976 only 1,495,900 were employed in enterprises with foreign capital participation out of the total German working population of 15,043,000. This would represent a drop to 9.9 per cent from 13.3 per cent in 1972. The data, however, does not permit us to assess the role of the larger MNEs in this connection, nor does it attempt to relate the decline in foreign investment to the apparent drop in employment. Cf. Bundesbank, 1979, op.cit. p.37.

²Bundesbank, 1978, op.cit., p.35.

³According to William Chun, "Capital expenditures by Majority-Owned Affiliates of U.S. Companies, 1979," Survey of Current Business, No.3 1979, it has been estimated that American MNEs are planning to increase capital expenditures in Germany during 1979 by 27 per cent, especially for transport equipment and non-electrical machinery.

8) MNEs have been looked at in the past as one, and certainly not the most important, factor of such change. However, concern over these enterprises and their employment effects are now becoming more articulate in particular as a reflection of the relative decline in economic growth and employment which contrasts to the German experience in the past of full and over-full employment. As yet it would appear that multinational enterprises are not looked at, by public policy at least, as a phenomenon requiring special measures in economic and social adjustment policies but as a one element among many others to be considered in this context.

9) Finally it must be realised that the general employment situation has improved in the Federal Republic of Germany (only 736,000 registered unemployed in September 1979). While the Federal Republic of Germany is returning thus practically to a situation of almost full employment (at least in the Keynesian sense), one has to realise that the adjustment capacity of the labour market to structural change is certainly more limited than in the past periods of unprecedented growth. One aspect to be stressed in this situation is the greater general capital intensity together with the lower future growth potential of industry as compared to services (and also the lower rates of capacity utilisation) which makes it that economic growth will be on average less employment generating than in the past. This consideration is relevant naturally also for any future employment generation that can be expected from multinational enterprises.

Table 1 - FOREIGN MULTINATIONAL ENTERPRISES IN THE FEDERAL REPUBLIC OF GERMANY: TURNOVER, EXPORTS, EMPLOYEES (1974)

Company	Sector	Parent company/ Home country	Turnover million DM	Exports	Export- quota %	Employees		
						FRG	World	FRG to world %
ESSO	Mineral Oil	Exxon/USA	10,629	a		4.4	133.0	3.3
Deutsche Shell	Mineral Oil	Shell/GB, Neth.	10,225	a		5.1	164.0	3.1
Deutsche BP	Mineral Oil	BP/GB	7,166	a		5.1	68.0	7.5
Deutsche Unilever	Food, bev., tobacco	Unilever/Neth., GB	6,929	na	10	37.9	337.0	10.6
Deutsche Texaco	Mineral Oil	Texaco/USA	5,946			6.6	76.4	8.6
Ford-Werke	Automotive	Ford/USA	4,983	3,132	63	49.4	464.7	10.6
Adam Opel	Automotive	General Motors/USA	4,852	1,800	37	52.4	734.0	7.1
IBM Deutschland	Electronics	IBM/USA	4,828	1,593	33	24.7	292.4	8.4
Mobil Oil	Mineral Oil	Mobil/USA	3,935	a		2.3	73.1	3.1
Alfsem. Dtsch. Philips	Electronics	Philips/Neth.	3,497	a		35.5	412.0	8.6
BAT	Tobacco	BAT/GB	3,421	a		4.6	157.0	2.9
Brown, Boveri & Cie.	Electronics	BBC/Switz.	2,897	711	25	39.2	96.2	40.7
M. Brinkmann	Food, bev., tobacco	Rothmans/GB	2,738	200	7	5.3	25.0	21.2
Stand. Elektr. Lorenz	Electronics	ITT/USA	2,685	558	21	37.6	409.0	11.6(b)
Enka Glanzstoff	Chemicals	AKZO/Neth.	2,150	970	45	24.0	105.4	22.8
Nestlé Gruppe	Food	Nestlé/Switz.	2,000	a		13.8	138.8	9.9
Deutsche Marathon	Mineral Oil	Marathon/USA	1,570	a		0.8	9.5	8.4
Schmalbach Lubeca	Tin ("EM-Maren")	Con. Can./USA	1,186	a		12.2	65.1	18.7
Michelin Reifenwerke	Rubber	Michelin/F	1,132	na		10.4	100.0	10.4
Falten & Guillaume	Electronics	Philips/NL, Arbed/Lux.	1,289	348	27	18.2	412.0	4.4
Du Pont de Nemours	Chemicals	Du Pont/USA	1,007	496	49	4.4	136.9	3.2
Deutsche Fins	Mineral Oil	Petrofina/B	1,004	20	2	1.0	22.2	4.5
SKF	Mechanical engineering	SKF/S	1,002	390	39	14.7	61.0	24.1
Deutsche ICI	Chemicals	ICI/GB	1,000	300	30	4.5	201.0	2.2
Grünzweig & Hartmann	Chemicals	St. Gobain/F	958	80	8	10.5	146.0	7.2
Maizena	Food	CPC/USA	827	74	9	4.6	44.5	10.3
Deutsche Solvay	Chemicals	Solvay/B	808	a		4.6	44.5	23.8(c)
Kali-Chemie	Chemicals	Solvay/B	775	a		6.0	44.5	11.6(b)
Alfred Teves	Mechanical engineering	ITT/USA	750	150	20	10.0	409.0	14.1
Gerresheimer Glas	Stones and earthen goods	Owens/USA	731	105	14	9.4	66.8	7.7
Kraft	Food	Kraftco/USA	727	145	20	3.9	50.4	5.2
Haus Neuberger	Beverages	Reynolds/USA	706	45	6	1.7	32.5	4.5
Internat. Harvester	Mechanical engineering	Int. Harvester/USA	701	380	54	5.0	111.0	4.4
ZM Deutschland	Chemicals	ZM/USA	519	140	27	3.7	83.6	4.4
T o t a l e			95,573	15,803	17	473.5	5,730.0	8.9

SOURCE: Rolf Jungnickel/Henry Krüger/Matthias Lefeldt/Manfred Holthus/Barbara Erhardt, Einfluss multinationaler Unternehmen auf Außenwirtschaft und Branchenstruktur der Bundesrepublik Deutschland, Hamburg 1977, pp. 40-41

a = Information only available for corporation as a whole b = Standard Elektrik Lorenz + Alfred Teves c = Deutsche Solvay Werke + Kali-Chemie

T A B L E 2 - German-owned multinationals

Enterprise	Sector	Employees			Germany	Turn over (World)	Foreign production ^a		Export quota ^b	Foreign turn over to world
		World	Overseas	%			Mill. DM	%		
		1000	1000	%			Mill. DM	%		
Bayer	Chemicals	169	approx. 62.0	approx. 37	107	18 879	approx. 6 000	approx. 32	56 ^c	66
Hoechst	Chemicals	179	71.9	40	107,1	20 201	5 700	23	51	63
BASF	Chemicals	111	22,6	20	88,7	19 736	4 500	approx. 28	55 ^c	51
Siemens	Electronics	309	88,0	28	221	17 226	4 500	approx. 26	30	46
Volkswagen	Automobiles	204	62,0	30	142	16 966	3 826	23	65	70
Daimler-Benz	Mechan. eng.	155	25,1	16	129,9	16 958	2 220	13	51	55
Mannesmann	Steel, Mechan. eng.	112	approx. 21,0	approx. 19	91	13 180	1 800	14	53	60
Henkel	Chemicals	34	12,4	36	21,6	4 640	1 450	31	22	46
AEG	Electronics	170	26,3	15	143,7	11 988	1 375	11	29	37
Bosch	Electronics	110	35,7	32	74,3	7 076	1 200	17	39	52
KHD	Mechanical eng.	45	5,3	12	39,7	4 695	999 ^d	21	50	61
Boehringer/Ingelb.	Chemicals	19	9,5	51	9,5	1 743	approx. 800	approx. 46	34	64
Reemtsma	Food, bev., tobacco	40	4,7	46	5,3	4 768	616	13	1	14
Grundig	Electronics	33	9,0	28	24	2 066	approx. 600	approx. 22	35	43
Krupp	Steel, Mech. eng.	81	6,7	8	74,3	9 177	579	6	33	37
Metallgesellschaft	Non-ferrous metals	app. 31	2,8	approx. 9	28,7	7 207	approx. 540	approx. 7	24	26
Degussa	Chemicals	app. 21	approx. 4,0	approx. 20	17	4 021	approx. 500	approx. 12	43	49
Freudenberg	Textiles	23	7,5	approx. 32	15,5	1 635	490	30	32	53
Wella	Chemicals	8,2	approx. 5,2	approx. 63	3,0	744	approx. 480	approx. 65	18	approx. 67
Merck	Chemicals	15	7,1	49	7,1	1 263	approx. 470	approx. 39	44	approx. 66
Ossram	Electronics	23	8,5	36	14,5	943	463 ^d	49	41	57
Schering	Chemicals	19	approx. 6,0	approx. 32	13	1 718	approx. 450	approx. 26	45	approx. 48
Kugelfischer	Mechanical eng.	35	8,4	24	26,6	1 847	440	24	46	59
Varta	Electronics	21	14,5	69	6,5	1 689	approx. 420	approx. 25	21	41
Feldmühle	Wood, Paper	app. 13	approx. 2,3	approx. 18	10,7	2 020	approx. 360	approx. 18	21	approx. 35
Beiersdorf	Chemicals	11	4,8	43	6,2	940	350	37	17	48
Triumph internat.	Clothing	app. 18	approx. 12,0	approx. 67	6	700	340	approx. 49	3	approx. 50
Liebherr	Mechan. eng.	8,4	2,9	35	5,5	892	240	27	57	68
Villeroy & Boch	Stones, Earth	16	4,9	30	11,1	765	226	50	41	54
KSB	Mechan. eng.	app. 11	approx. 2,6	approx. 23	8,4	840	215	26	49	62
Total		2,015	556	28	1,459	196 463	42 129	21	43	53

a Production by foreign subsidiaries
b Exports: turn over in Germany
c Only tobacco
d Turn over of subsidiary
e Information only for parent company

TABLE 3 -

STRUCTURAL DISTRIBUTION OF MULTINATIONAL ENTERPRISES* IN GERMANY (1973)

I N D U S T R Y	All MNEs			German MNEs			Foreign MNEs		
	No.	Turn-over		No.	Turn-over		No.	Turn-over	
		Bn DM	%		Bn DM	%		Bn DM	%
Chemicals	17	42.6	19.6	11	37.6	27.0	6	5.0	6.4
Petroleum Manufacturing	7	26.7	12.3	-	-	-	7	26.7	34.2
Ferrous & non- ferrous metals	3	11.6	5.3	3	11.6	8.3	-	-	-
Steel, machin- ery & vehicles (of which: automotive)	14 (4)	61.4 (40.5)	28.3 (18.6)	9 (2)	46.4 (27.9)	33.3 (20.0)	5 (2)	15.0 (12.6)	19.2 (16.2)
Electrical engineering	12	44.9	20.6	7	31.0	22.2	5	13.9	17.8
Food, beverages & tobacco	10	23.1	10.6	3	8.9	6.4	7	14.2	18.2
Other manufact- uring industry	10	7.2	3.3	6	3.9	2.8	4	3.2	4.1
T o t a l s	73	217.5	100	39	139.4	100	34	78.0	100

* A sample of 73 enterprises.

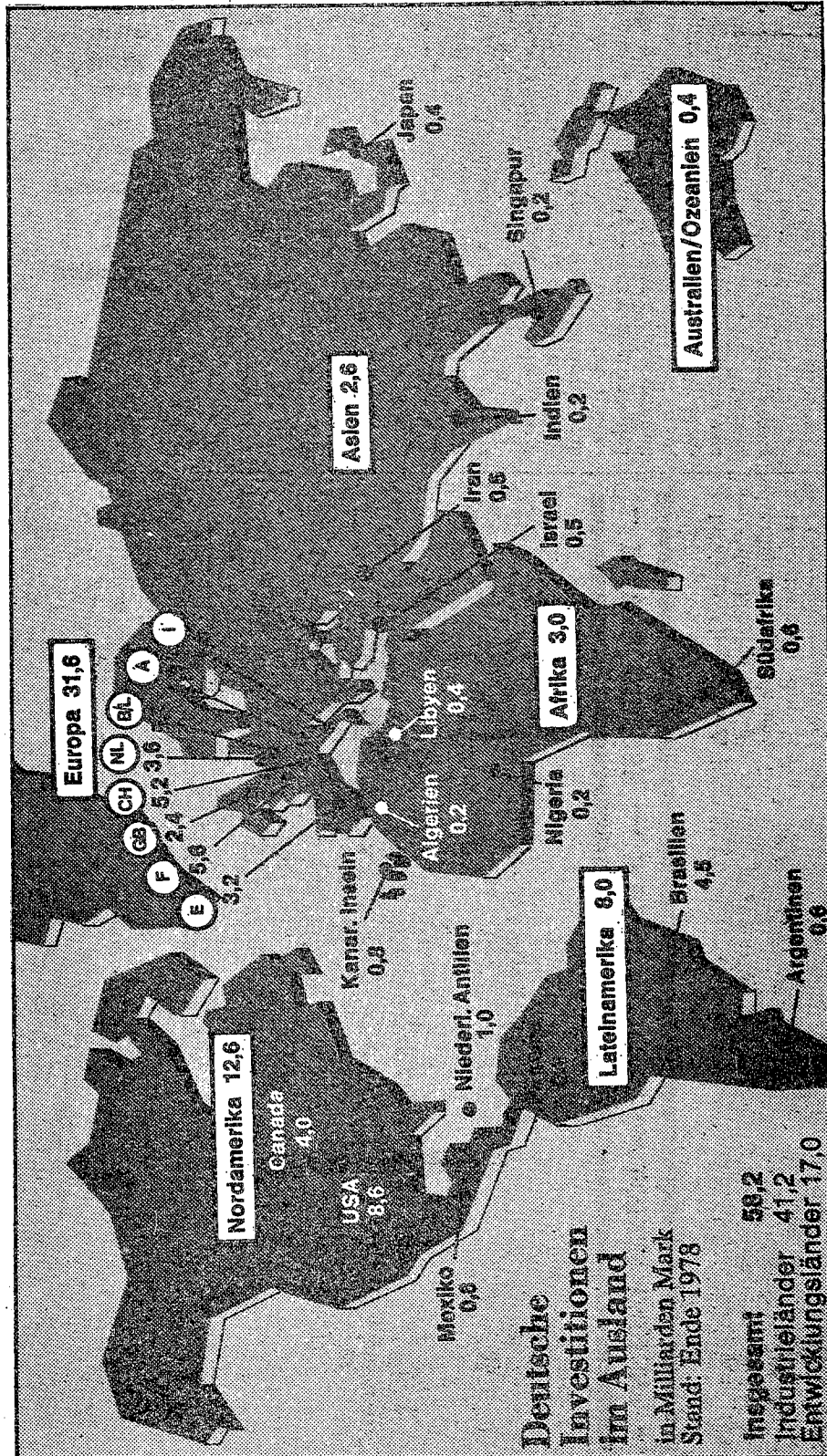
SOURCE: Jungnickel et al, op. cit., p. 281.

TABLE 4 - NUMBER OF EMPLOYEES IN GERMAN-OWNED MNEs ABROAD AND IN GERMANY (DATA ON 149 FIRMS - 1974)

	1 Total employees in Germany and Abroad	2 Employees in Germany	3 Guest Workers in Germany	4 Employees Abroad	5 Of which in the EEC	6 Employees Abroad in plants without own production	as a percentage of					
							1	2	1	4	3+4	5
All firms: 149	1,516,379	1,186,677	197,027	336,151	107,448	47,386	22.2%	28.3%	35.2%	32.0%	14.1%	
Firms with over 5,000 employees: 38	1,370,804	1,071,372	179,876	299,432	101,081	45,257	21.8%	27.9%	35.0%	33.8%	15.1%	
Firms with 1000 to 5,000 employees: 49	116,963	86,693	14,012	30,270	5,126	1,856	25.9%	34.9%	37.9%	16.9%	6.1%	
Firms with less than 1000 employees: 62	28,612	22,163	3,139	6,449	1,241	273	22.5%	29.1%	33.5%	19.2%	4.2%	

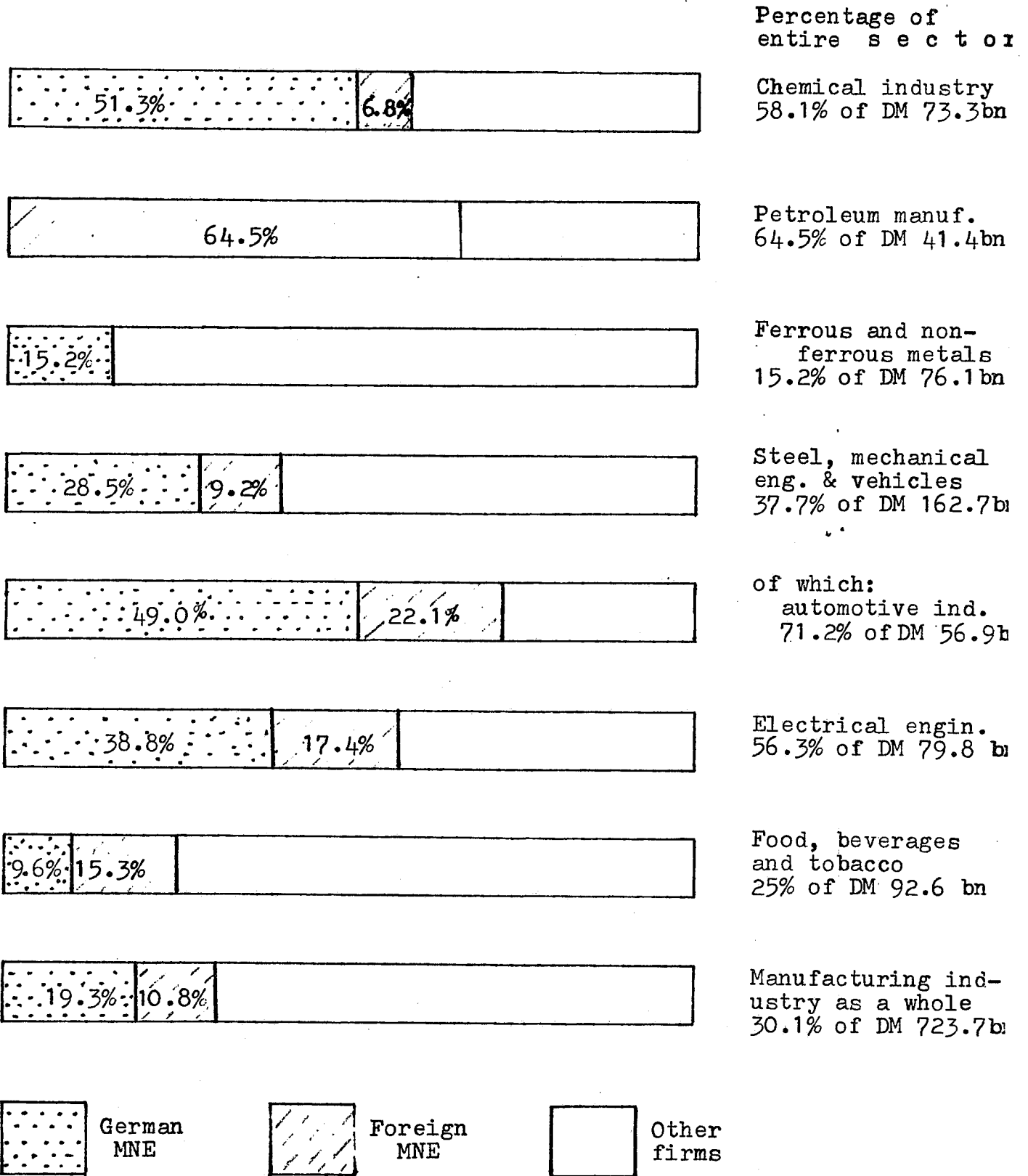
SOURCE: Folker FRÖBEL/Jürgen HEINRICHS/Otto KREYE, Die neue internationale Arbeitsteilung, Reinbek bei Hamburg 1977, p. 278

TABLE 5 - GERMAN FOREIGN DIRECT INVESTMENT (END OF 1978)
IN BILLION DM



SOURCE: Die Zeit, No. 29, 13 July 1979, p. 17

Diagram 1 - IMPORTANCE OF MNEs (FOREIGN AND GERMAN) FOR SELECTED SECTORS OF THE MANUFACTURING INDUSTRY (1973)



SOURCE: Jungnickel et al, op. cit., adapted from pp. 283 and 284