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Investment behavior and yields in some West German industries

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INVESTMENT BEHAVIOR AND YIELDS IN SOME
WEST GERMAN INDUSTRIES

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Net investment plays a crucial role for the economic development of a country. It contributes to the growth of real income and to the supply of jobs. Therefore, in view of sluggish growth and rising unemployment in Germany, the government as well as the Deutsche Bundesbank and the Council of Economic Experts have repeatedly pointed out the need to promote overall investment. Looking at the share of fixed investment in GDP in the German economy which is relatively high by international standards the complaints about the weakness of investment appear to be somewhat exaggerated. However, a closer look at the investment numbers published by the Deutsche Bundesbank (1983a, 1984) shows that the structure of domestic capital formation has changed dramatically since 1960. While investment by the non-financial business sector excluding housing accounted for 55 per cent of total investment in 1960, it has declined to some 30 per cent in the early 1980s (Figure 1). Investment in residential construction and public investment have increased their share from about 44 per cent to more than two thirds in the early 1980s. Thus, instead of using more resources for enlarging and improving productive capacities, an increasing share of domestic savings has been channeled into projects the choice of which has not been made according to private profitability but from the point of view of social benefits. Among these projects are expenditures on infrastructure, public swimming pools, city halls, hospitals, family homes etc., which increase social consumption but hardly contribute to improve the competitiveness of the German industry in domestic and in international markets.

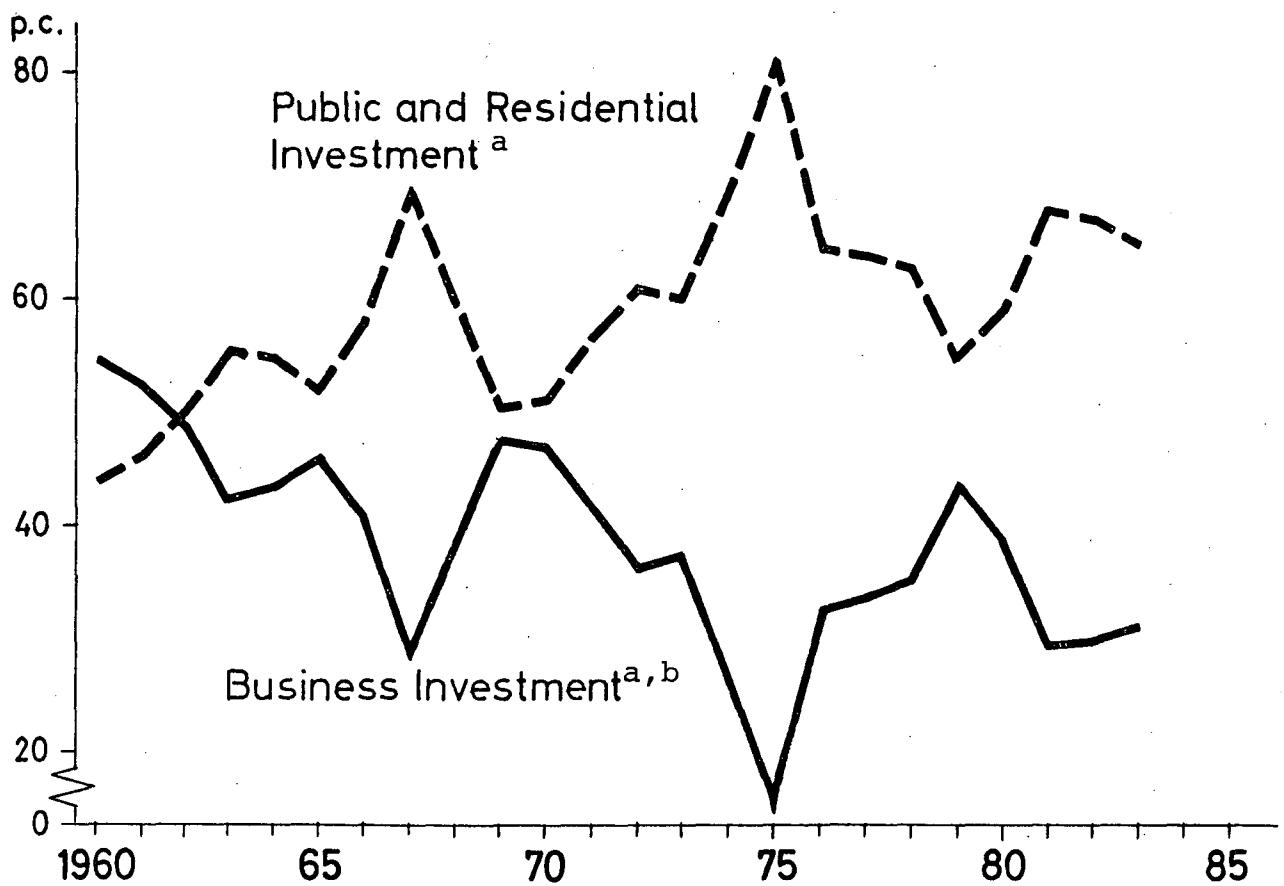
Investments in new production facilities by German corporations have been disappointingly low over the last decade. This is the more surprising since technological progress seems to have accelerated since the early 1970. However, despite of rapidly advancing technologies, of a multitude of innovations, and of the emergence of new products investment in new production facilities and in new product lines has been weak in Germany. This indicates that the German economy has not managed

to maintain its leading position in international markets for high technology products. Since the level of wages remained persistently high many companies found it difficult and often even impossible to successfully compete with products from newly industrialized countries. The result of this was a strong decline in industrial employment over the last 15 years. The rate of unemployment rose from less than 1 per cent of the labor force in the late 1960s to more than 8 per cent in the early 1980s. The most recent German economic recovery, which began after the change of government in September of 1982, had no effect other than to temporarily stop the increase of the number of unemployed. Corporate investment activity, essential for enlarging production capacities and hence for providing new jobs, has failed to improve noticeably. Although business surveys indicate that profit expectations have bettered, corporations remained hesitant as far as investment plans are concerned (Industriekreditbank, 1984).

Politicians as well as most commentators have seized upon the high level of interest rates as the main reason for the poor performance of investment in new production capacities (1). The West German Government as well as other European governments again and again have blamed the large US-budget deficits for the high level of interest rates and accordingly for the weakness of investment and growth in most European countries. However, how is it possible that the country which is said to

(1) This view has been emphasised by many economists. Large economic research institutions such as the HWWA-Institute in Hamburg, the DIW-Institute in Berlin, and the Ifo-Institute in Munich came to the conclusion in their most recent investigations of structural change in the West German economy that the decline in investment activity in recent years was triggered by the rise in interest rates. The Institut für Weltwirtschaft in Kiel and the RWI in Essen, however, have stressed the low rate of profitability as a reason for the sluggishness of investment. See HWWA-Institut für Wirtschaftsforschung [1983], Deutsches Institut für Wirtschaftsforschung - DIW [1983], IFO-Institut für Wirtschaftsforschung [1983], K. D. Schmidt et al. [1983], and Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI) [1983].

Figure 1: Structure of Net Investment in Westgermany
1960 - 1983



^aIn per cent of total investment. - ^bNon-financial business sector excluding housing.

Source: Deutsche Bundesbank (1983a, 1984)

be responsible for the world-wide increase in interest rates and which is "suffering" from the highest level of real interest rates, is experiencing a virtual investment boom? In the US-economy, investment in machinery and equipment was about 24 percent higher in the first half of 1984 than a year ago, while such investment had declined by 1.5 percent in Germany. What is the reason for high real rates of interest to be accompanied in one country by a persistently weak investment whereas in the other country investment expands rapidly?

Company Profits and Interest Rates - Determining Factors of Investment Activity?

According to conventional thinking in investment theory, the readiness to invest in new production capacities depends on the relation of expected returns on fixed assets to expected returns on financial assets (1). When the expected profit from production activities rises (falls) in relation to the expected income from financial assets, then more (less) investments in fixed assets will be made. Changes in nominal interest rates, taken for themselves, do not allow any definite conclusions as to the desirability of investments in financial assets compared to investments in fixed assets. An increase in interest rates that is caused by an increase in the expected rate of inflation which is as strong or even stronger could hardly have a favorable effect on the readiness to acquire financial assets. The nominal interest rate must therefore be adjusted for expected inflation. Only when this has been done can an unambiguous indicator be obtained for the return on financial investments, which is comparable to the rate of return on fixed assets. This real interest rate is determined in the overall economy by intertemporal preferences, i. e. by the propensity of economic subjects to forego present in favor of

(1) Tax aspects do not need to be considered here, since for existing companies income tax rates are the same for income from both forms of investment, as long as the company concerned is in both cases a stock corporation.

future consumption and by the expected return on fixed assets. If the preference for present consumption increases because, say, age groups with more lavish consumption patterns reach maturity or because political parties with a strong preference for present social consumption come to power, then the real interest rate rises. Because of this, it becomes less worthwhile to invest in future production capacities, at least as long as profit expectations with respect to fixed assets do not change; investments in new production capacities decline. The real rate of interest also increases if, instead of intertemporal preferences, the expected return on fixed assets rises, because, say, progress has been made in production techniques, new markets have been opened up, investment-inhibiting regulations have been abolished, or distribution conflicts have been solved. In this case the rising demand for investment capital assures a rising interest rate on financial markets.

Reliable statements on changes in the investment climate can be made only if they are based on changes of the yield on fixed assets relative to real interest rates (on financial assets). The development of real interest rates by itself allows a conclusion concerning investment only if the return on fixed assets is constant (1); in the same way, an improvement in profit expectations taken for itself can be interpreted as an indication of more favorable investment conditions only if the temporal preference for present consumption has not changed. Whether either of these conditions holds is an empirical question.

Return on Fixed Capital, Real Rate of Interest and Investment

An empirical investigation of investment behavior involves considerable difficulties. For one thing, investment decisions

(1) It conforms with Keynesian thinking to pretend that the return on fixed capital is exogenous. This, however, is an abstraction of reality that makes these models useless for the forecast of capital investment.

depend to a large degree on expectations, which cannot be measured. For another thing, the investment expenditures that are accounted for as net investments do not necessarily correspond exactly to the volume of new investment projects. Statistically, those investment expenditures are registered as replacement outlays that are necessary in order to compensate the depreciation on the capital stock. In an economic sense such outlays can certainly include new investment projects, because in a growing economy and over the course of time, certain production locations will be closed down on account of unprofitability and new production branches will arise. Conversely, it is also possible that investment expenditures for the maintenance of already existing production capacities at times exceed the calculated depreciation.

Furthermore a large part of overall investment outlays is influenced or determined by other factors than by market-related (relative) rates of return on fixed assets. This is more or less true for the bulk of public investment as well as for investment in agriculture, in coal mining, and in residential construction which are subsidized by a variety of measures. In some instances the "profitability" of such investment projects is determined by tax refunds and the possibility of deducting losses up to a multiple of the funds invested from taxable income from other sources. Expenditures of this kind may be rather considered as a tax-induced reorientation of resource allocation with distributional side-effects than as investment projects based on market-related yield expectations (1). The national income accounts statistic does not distinguish between politically induced and economic investments. If public investment is excluded the numbers still include investment in highly subsidized areas such as residential construction, agriculture, coal mining, steel, shipbuilding, railways and postal services.

(1) This is not to say that investment in these areas would not be undertaken in the absence of government interventions. However, under yield considerations the size and the time pattern would probably differ substantially. In this context it is important to note that such investments cannot be expected to be determined by market influences.

Therefore, the analysis of the influence of yields and interest rates on investment activity is based on data published in the annual reports of corporations in the Federal Republic of Germany. The data are collected by the Deutsche Bundesbank and are aggregated for the corporate sector as a whole and for certain industries. (Deutsche Bundesbank, 1983b).

Only those economic areas are covered by the statistics "in which the bill of exchange is significant as a means of finance". These statistics basically comprise the manufacturing and the construction industry as well as trade; the service sector (including financial enterprises such as banks and insurance companies) is only represented in a few cases. The gross income of the enterprises covered amounted to about 1.1 billion DM in 1981, compared to a gross value added for all economic sectors of about 1.4 billion DM. Investments of these corporations account on average for about one third of the investments of the non-financial business sector excluding housing and exhibit noticeably stronger cyclical variations than overall business investments. The survey primarily represents those areas that are characterized by a high intensity of international competition and in which the number of jobs has dwindled in the last ten years. Thus, this set of corporations is likely to represent approximately that part of the economy in which market-oriented yield considerations are a dominant determinant of investment behavior.

Because of these problems in calculating the economically relevant data, the analysis of the relationship between profit on fixed assets and interest on financial assets on the one hand and investment on the other hand can only yield information on general tendencies, but not on econometrically precise relationships. In any case the investigation can give some idea of how these factors were connected with investment activity in the past. For example, if it were to turn out that there is a close positive relationship between profits and investment or a close negative relationship between interest

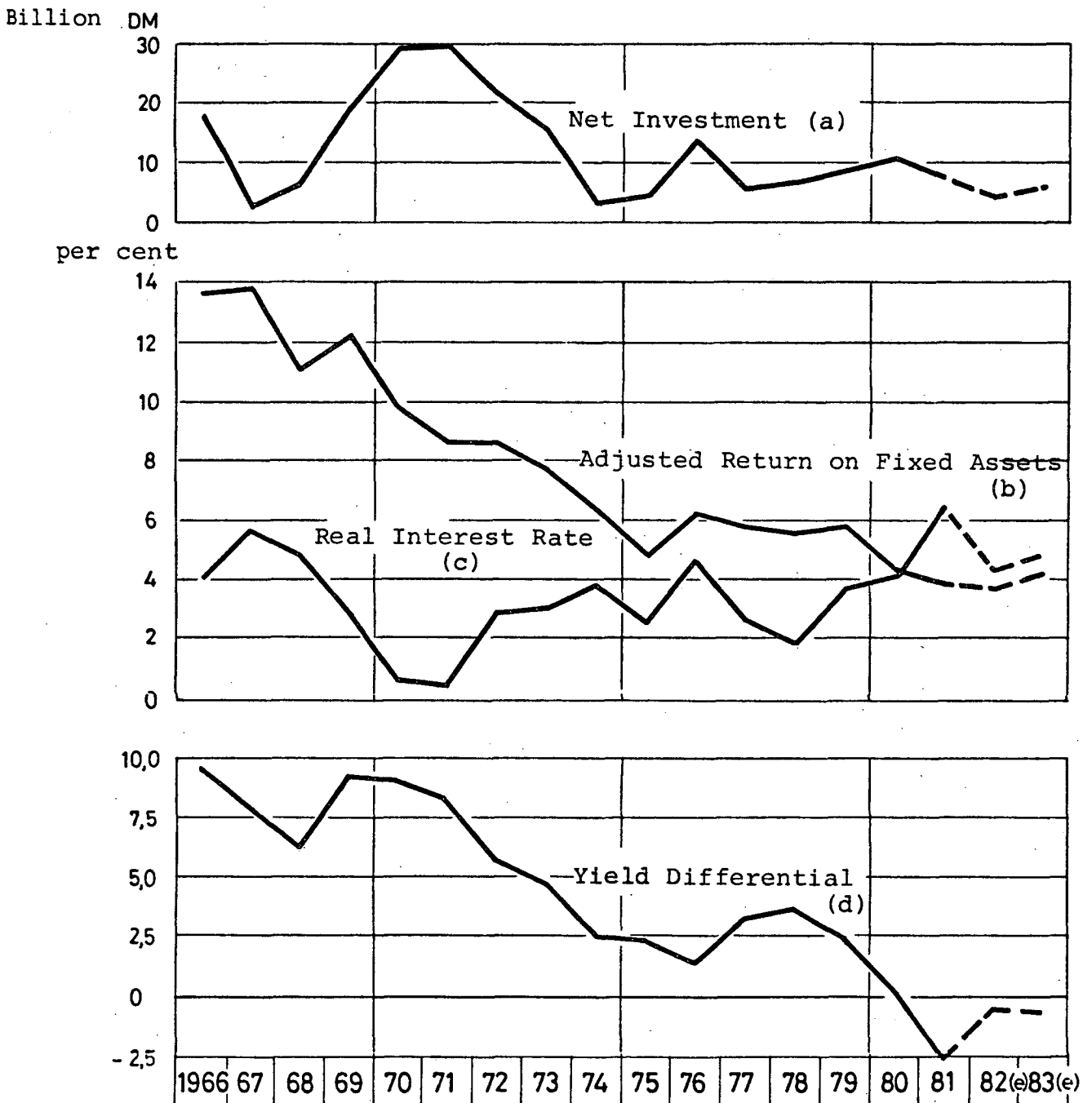
rates and investment, then this result would be quite significant for short-term forecasts and could help anticipate future development of investment in fixed assets.

With the help of the data on the fixed capital stock that are accounted for in the balance sheet statistics, the net investment of enterprises can be determined. For this purpose the depreciation allowances for fixed assets are subtracted from the capital stock. Annual net investments of corporations can thus be obtained by calculating the increase in the capital stock from the end of one year to the other.

According to the statistics of the annual reports of German corporations, the book value of fixed assets (after depreciation had been deducted) rose 140 percent in the period from 1965 to 1981; this corresponds to an average annual increase of 5.5 percent. The stock of fixed assets, however, did not increase evenly during this interval; on the contrary, its changes, i. e. net investment, show strong cyclical fluctuations. In addition, it is interesting to note that the average annual investment was considerably lower in the second half of the period (1974 - 1981) than in the first, a development that becomes much more evident when investments are adjusted for inflation (Figure 2).

The gross income of the companies (annual surplus before taxes) rose by 46 percent from 1965 to 1981. The annual surplus (before taxes) with respect to fixed capital plus inventories yields a rate of return on fixed assets that is often used as an indicator to evaluate the investment climate. It declined from 23 percent in 1965 to about 15 percent in 1983; however, the decline of that rate is hardly sufficient to fully explain the lackluster performance of investment in the seventies and early eighties.

Figure 2 - Net Investment , Real Interest Rate and Adjusted Return on Fixed Assets 1966 - 1983



(a) In 1966 Prices. - (b) Before taxes. - (c) Yields on bonds outstanding less the increase in the GNP deflator. - (d) Adjusted yield on fixed assets less real interest rate. - (e) Estimated values.

Source: Cf. Table 3.

The "True" Earnings Capacity of the Capital Stock

The development of the annual surpluses shown in the corporate balance sheets is not, however, a reliable indicator of the earnings capacity of the capital stock employed in corporate enterprises. Changes in the financing structure (relation of net worth to outside capital including reserves) as well as inflation-induced profits, i. e. illusory profits, resulting from the required practice of basing depreciation on historical and not on (higher) replacement costs of fixed assets have distorted the development of profit. While in calculations of the rate of return the annual surplus is usually adjusted for such influencing factors, it is nevertheless often overlooked that the annual surplus is not obtained solely through the sale of the goods and services produced by the company, the firm's "natural" activity, but also through income from investment in financial assets and holdings and through extraordinary profits as well.

In recent years enterprises in Germany have proceeded to invest more of their financial means in short- and long-term financial assets as well as in holdings. According to the statistics of the annual statements of enterprises published by the Bundesbank, the balance sheet items "financial investments" and "holdings" increased almost four-fold from 1965 to 1981, while the stock of fixed assets - i. e. the capital employed for actual production - rose by only 2 1/2 times [Deutsche Bundesbank, 1983]. Investments in financial assets and holdings yield revenues on a regular basis, which - together with extraordinary profits (from, say, the sale of real estate that has gone up in value) - contribute to gross corporate income. In recent years these sources have gained considerable significance for profits. These revenues can be regarded as sunk yields and therefore they do not influence present investment decisions.

In order to gain a more accurate picture of the development of the return on fixed assets, the annual surplus has been broken down into its components: ordinary operating earnings and

earnings that are neutral with respect to production. The neutral earnings are made up of interest returns and "other returns" of the companies (revenues from holdings, from the release or reduction of reserves or valuation adjustments as well as from losses and gains in capital assets) less neutral outlays. The balance sheet statistics of the Bundesbank do not show the neutral outlay. However, the costs of realizing these revenues are as a rule negligible. For example, for 59 business concerns that are required to publish their annual statements of assets and liabilities and which have a total annual turnover of about 100 billion DM, the cost amounted on average to 10 per cent of the neutral earnings for the years 1980 and 1981 [Statistisches Bundesamt, 1984]. Consideration of these costs would affect only the level of neutral earnings, but not the change in the revenue structure, which is what matters here.

In order to gain an approximation for the actual earning capacity of fixed assets, the annual surplus first has to be adjusted for influences that result from changes in the financial structure. For this purpose the surplus was increased by the amount of the interest expenditure (gross return = annual surplus before taxes plus interest payments on borrowed capital). If the neutral earnings are subsequently subtracted from the gross return, then a considerable change in the revenue structure becomes evident: while the neutral earnings contributed a scant third of returns in the mid-1960s, they comprised almost two thirds of returns in 1981 (Table 1). Thus, production as a source of corporate profits became less and less important; ultimately, profits were realized for the most part through outside activities. The shift in the revenue structure was especially blatant in the mid-1970s, when the weakness of corporate investments also began.

If one examines the development according to individual business branches, it is remarkable that the revenue structure was relatively uniform in 1965. After that, the contribution of operational revenues to gross revenues decreased everywhere,

Table 1 - Share of Ordinary Operating Earnings in Gross Yield for Selected West German Industries (per cent)

	1965	1970	1976	1980	1981
Manufacturing - total	78,3	62,7	54,3	45,7	38,8
Chemicals	74,4	47,8	40,4	21,5	4,6
Manufacture of plastic products	77,8	60,3	60,4	54,6	38,6
Extraction and processing of stones and earthen goods	73,0	54,9	34,7	43,6	30,1
Iron and steel processing industry	68,4	39,7	1,0	-10,0 ¹	-36,1 ¹
Non-ferrous metals	74,3	31,3	-8,2	9,6	-13,6 ¹
Steel and light-metal construction	73,1	60,7	34,6	38,8	24,0
Mechanical engineering	72,5	56,6	33,9	21,9	17,0
Road vehicle construction	70,9	63,1	67,0	16,4	17,5
Electrical engineering	70,9	42,8	20,0	0	0
Fabricated metals industry	81,6	79,3	70,4	61,7	44,7
Woodprocessing	77,3	55,3	54,2	49,3	42,3
Furniture	79,9	66,9	61,1	55,3	62,6
Paper and cardboard processing	78,4	69,2	40,8	32,3	20,3
Textile industry	71,9	38,4	21,7	19,7	19,5
Clothing industry	78,4	57,0	51,9	46,8	60,2
Food industry	82,6	69,4	65,1	49,7	49,2
Construction industry	62,9	58,3	34,9	54,2	50,6
Wholesale trade	52,2	43,1	40,4	32,6	43,0
Retail trade	68,7	57,6	57,7	48,9	63,1
All industries	71,1	56,8	49,1	41,1	40,4

¹ Negative operating earnings in per cent of the neutral earnings.

Source: Deutsche Bundesbank, Jahresabschlüsse der Unternehmen in der Bundesrepublik Deutschland 1965-1981, Special Publication No. 5 of the Deutsche Bundesbank, Frankfurt 1983; own calculations.

but with considerable differences from industry to industry. The share of ordinary operating earnings in gross revenue decreased more than on average in electrical engineering, in non-ferrous metal production and predictably, in the iron and steel industry. In the last two cases there were even operating losses at the beginning of the 1980s. In contrast to these, the share of operational revenues in the woodprocessing industry, in apparel and in retail trade remained relatively high. The shift of the revenue structure at the expense of the earnings realized in production in the classic German export branches of mechanical engineering and road vehicle construction is also noteworthy. Of course, this still says nothing about the present level of returns on fixed assets, however, the deterioration is striking.

For a comparison of yields on financial assets with return on fixed assets some balance sheet adjustments are required. It is necessary to correct the values for real estate, buildings, and machinery that are shown in the aggregate balance sheet. This is because durable goods are shown in the balance statement at their respective purchasing prices, diminished by depreciation. However, in an inflationary environment, the replacement prices for a certain capital good surpass the original purchase prices. In order to take this effect into consideration, the book values of the capital assets were inflated (1). Inventories were added to the capital assets at

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- (1) The inflator was calculated as follows: the capital stock indicated in the national income accounts of the Federal Statistical Office for the entrepreneurial sector (excluding housing at replacement prices were put in proportion to the capital assets at original purchase prices. The book value of fixed assets in the aggregate corporate balance sheet was multiplied by this ratio.
 - (2) Note that this rate of return has not been adjusted for illusory profits; thus it overstates the "true" profit-rate.

replacement prices. If ordinary operating earnings are divided by the capital stock thus calculated, one obtains a rough indicator for the current rate of return of fixed assets (2). The rates of return for various industries are shown in Table 2. It becomes evident that the rates of return, which - except for the steel industry - were between 10 and 20 per cent in the mid-1960s, declined considerably in the course of the 1970s.

In 1981 there were only six industries in which the rates of return were higher than the real rate of interest on fixed-interest-bearing securities. These include the woodprocessing, apparel, food and construction industries, as well as wholesale and retail trade, all of them industries which are exposed only slightly to international competition, either because of high transportation costs or because of protection from cheaper imports. Two industries even operated with production losses: steel and non-ferrous metals. The decline in returns is noteworthy in those capital goods industries which are believed to enjoy locational advantages in West Germany: mechanical engineering and road vehicle construction.

The decline of the rate of return was accompanied by a noticeable reduction of investment outlays. In order not to distort the picture by the development in individual years the average annual rates of returns and net investment outlays have been compared in Table 3 for medium term periods (the years from 1966 to 1973 and from 1974 to 1981). The table shows substantially lower numbers for both variables in the latter period. For about one half of the industries selected the rate of return was more than 50 per cent lower in the 1974 to 1981-period than from 1966 to 1973. In the iron and steel processing industry and in the non-ferrous metals industry the average annual rate of return was even negative from 1974 to 1981. The reduction of investment outlays was more pronounced than that of profits. In some industries (stone extraction and processing, non-ferrous metals, textile industry, and clothing industry) investments were not sufficient to cover replacement needs; production capacities shrank.

Table 2 - Rates of Return on Tangible Assets in West German Industries
(per cent)

	1966	1970	1976	1980	1981
Chemicals	16,5	7,1	5,5	2,8	0,5
Manufacture of plastic products	16,0	9,5	8,4	7,4	4,2
Stone extraction and processing	13,0	9,9	4,2	6,3	3,2
Iron and steel processing industry	5,2	6,0	0,1	-1,0	-4,8
Non-ferrous metals	12,1	4,1	-0,7	1,1	-1,3
Steel and light-metal construction	13,7	9,4	3,9	5,4	2,5
Mechanical engineering	11,5	8,2	4,2	2,4	1,7
Road vehicle construction	16,5	10,5	16,6	2,1	2,3
Electrical engineering	12,4	7,7	3,1	0,0	0,0
Fabricated metals industry	18,8	16,9	11,2	9,4	5,4
Woodprocessing	10,9	6,4	5,7	5,4	3,5
Furniture	18,3	11,2	8,5	7,7	7,7
Paper and cardboard processing	17,5	10,0	4,9	3,8	1,6
Textile industry	10,6	4,3	2,3	1,9	1,9
Clothing industry	18,8	9,1	7,9	6,4	8,4
Food industry	19,3	14,3	11,0	6,6	6,6
Construction industry	20,8	15,2	5,6	13,3	10,0
Wholesale trade	10,5	9,4	20,2	5,6	7,2
Retail trade	15,2	10,4	8,8	6,1	7,4

Source: Cf. Table 1; Federal Statistical Office, Fachserie 18. Volkswirtschaftliche Gesamtrechnungen, Reihe 5: Revidierte Ergebnisse 1960 bis 1982, Stuttgart 1983; own calculations.

Table 3 - Rates of Return on Tangible Assets and Net Investment in West German Industries (per cent and Millions of DM)

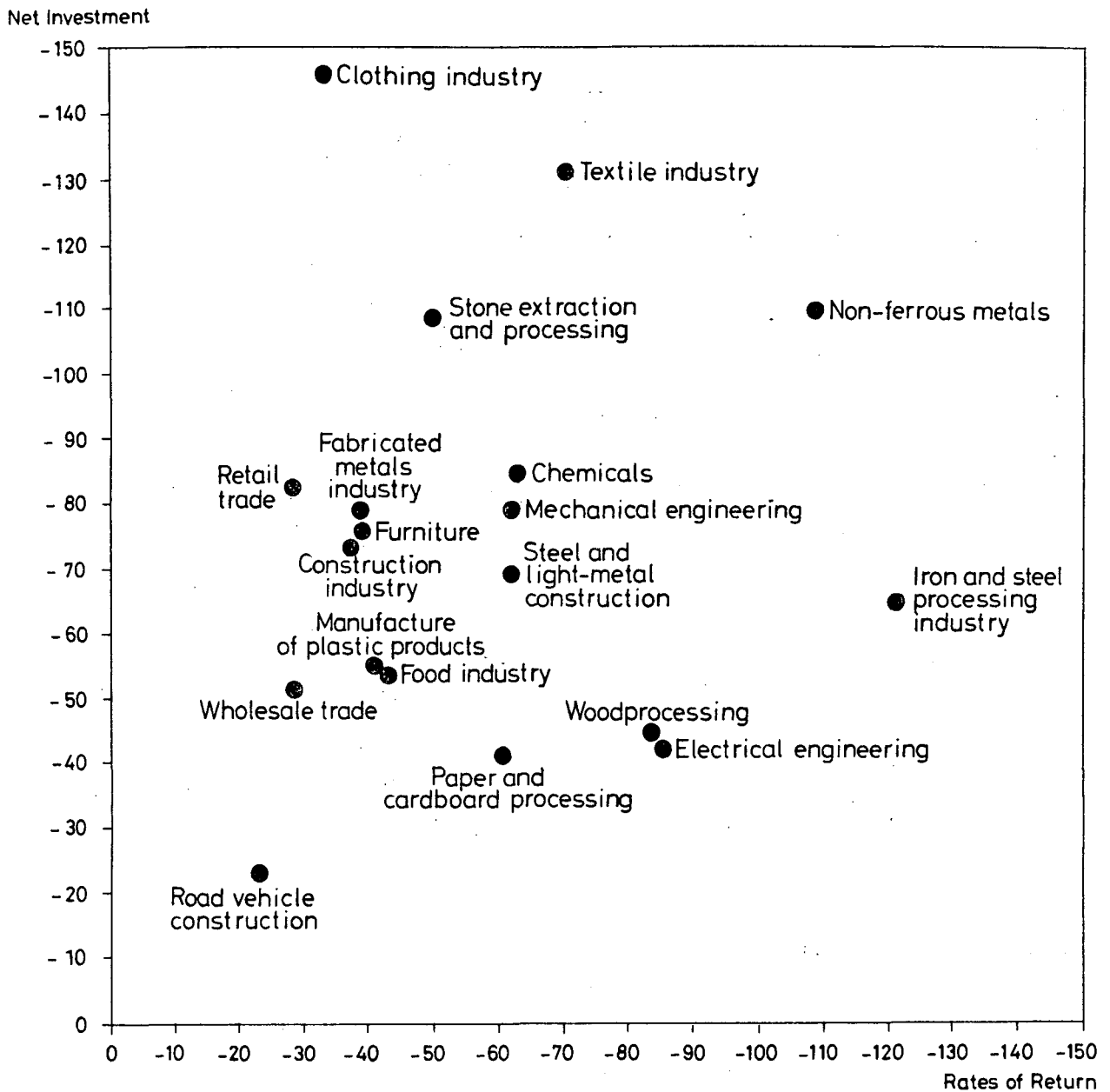
	Rates of Return on Tangible Assets ¹ p.c.		Net Investment ¹ Mill. of DM	
	1966-1973	1974-1981	1966-1973	1974-1981
Chemicals	11,8	4,4	1031,3	158,3
Manufacture of plastic products	11,9	7,0	243,1	109,2
Stone extraction and processing	10,0	5,0	441,7	-37,4
Iron and steel processing industry	3,4	-0,7	299,1	105,8
Non-ferrous metals	4,4	-0,4	211,7	-20,7
Steel and light-metal construction	9,6	3,6	166,2	50,8
Mechanical engineering	8,9	3,4	789,0	163,6
Road vehicle construction	12,3	9,5	661,8	512,9
Electrical engineering	10,0	1,4	704,0	411,5
Fabricated metals industry	15,9	9,6	425,7	86,9
Wood processing	8,2	4,6	104,3	17,6
Furniture	13,5	8,2	350,5	81,7
Paper and cardboard processing	12,6	5,0	137,9	81,8
Textile industry	7,1	2,1	214,5	-66,6
Clothing industry	11,6	7,8	92,0	-42,6
Food industry	15,5	8,9	1063,5	484,9
Construction industry	14,8	9,2	715,9	188,6
Wholesale trade	10,0	7,1	1485,7	728,7
Retail trade	11,1	7,9	1826,4	319,5
¹ Annual averages.				

Source: Cf. Table 1; Federal Statistical Office, Fachserie 18. Volkswirtschaftliche Gesamtrechnungen, Reihe 5: Revidierte Ergebnisse 1960 bis 1982, Stuttgart 1983; own calculations.

While in all industries analyzed in this paper there was a reduction of the rate of return as well as of net investments, the reduction was by no means proportional or uniform for different industries. Figure 3 shows the percentage decline of the average annual rate of return and of investment. In most industries the fall of investment outlays was much stronger than the deterioration of the profit rates (as measured in per cent of the average annual figures of the period from 1966 to 1973). An outstanding case is the clothing industry which managed to keep the rate of return at a relatively high level but cut investments drastically. Some industries, namely iron and steel processing and electrical engineering, suffered relatively large reduction of profits but refrained from curtailing investments correspondingly. The difference of the reaction of selected industries to the fall of the rate of return is probably due to differences in the exposure of industries to international competition, in the expected ability of the industry to improve profits by additional investments, and in the amount of subsidies (often granted for investment purposes) collected by individual industries. An analysis of these influences goes beyond the scope of this study which is based on balance sheet data. Thus, although there is clear evidence on the significance of yields for net investments, further analysis is required in order to explain the investment behavior of individual industries.

The rate of return ought to be adjusted for the inflation-induced illusory profit which arises because depreciation on fixed assets (machinery and buildings) is understated due to legal regulations which do only allow depreciation from the purchasing price. This illusory profit can be determined for all industries together and is shown in Table 4. If neutral returns and illusory profits are deducted from gross yields, then one obtains an approximate value for the ordinary operating earnings of German corporate enterprises, i. e. for the annual surplus (before taxes and including interest expenditures) that is realized within the framework of actual production operations. Ordinary operating earnings in relation to fixed assets at replacement prices yield the real return rate of fixed assets.

Figure 3: Changes of Net Investment and Rates of Return in Some Industries^a



^aPercentage change of average annual values of the 1974-to-1981 period over the 1966-to-1973 period.

Source: Deutsche Bundesbank (1983b). - Own calculations.

This real rate of return (before taxes) declined from about 14 percent in 1966 to 4 percent in 1981 [Dicke, Trapp, 1984]. This represents a much greater loss of earning capacity than is suggested by the changes in entrepreneurial profits as shown in the balance sheets. If one compares the rate of return on fixed assets to the real interest on financial assets (Table 4), then it becomes apparent that investments in fixed assets lost more and more of their appeal in the 1970s. At the beginning of the 1980s the yield on investments in financial markets was - despite low risks - even higher than the yield on investments in productive assets. An estimation of the real rates of return for the years 1982/1983 by means of preliminary results of the national income accounts and own calculations, shows that the earning capacity of fixed assets has not markedly improved of late. According to an analysis of the aggregated balance sheet of 857 companies, which was carried out by the Industriekreditbank [1984], investment in fixed capital remained weak in 1983; however, holdings of financial assets continued to rise strongly (1).

These data can admittedly only give a rough idea about the "true" return on the capital invested in fixed assets. However, despite the inaccuracy of individual data, there can be no doubt about the change of profits and returns. The calculations show that entrepreneurial profits were realized in recent years more and more through outside activities. The companies were no longer able to earn the risk bonus necessary for investment projects.

Production Profitability Must be Restored

Although (or also because) the federal government and the governments of the individual Länder have strongly increased subsidies to support corporations and rescue jobs in the 1970s, the yield differential in favor of investments in fixed assets, which had amounted to 8 percentage points in the

(1) A continuation of this trend in the 1st. half of 1984 is reported by the Deutsche Bundesbank [1984].

Table 4 - Returns of West German Corporations and Real Interest on Bonds, 1965 - 1983

Year	Gross Yield ¹	Neutral Yield ²	Illusory Profit ³	Ordinary Operating Earnings	Adjusted Yield on Fixed Assets ⁵	Yield Differential ⁶ (percentage points)	Real Interest Rate ⁷ (per cent)
	billion DM				(per cent)		
1965	94,52	27,77	5,96	-	-	-	3,2
1966	94,95	32,16	6,81	55,98	13,62	9,6	4,0
1967	94,31	32,61	5,86	55,84	13,80	8,1	5,7
1968	85,80	34,98	5,53	45,29	11,08	6,3	4,8
1969	99,79	39,50	5,92	54,37	12,07	9,3	2,8
1970	108,51	46,81	9,53	52,17	9,75	9,2	0,6
1971	114,75	49,74	11,97	53,04	8,60	8,2	0,4
1972	122,25	52,10	12,93	57,22	8,57	5,8	2,8
1973	131,41	60,74	15,14	55,53	7,74	4,7	3,0
1974	134,25	67,34	19,16	47,75	6,25	2,5	3,8
1975	129,37	69,55	21,07	38,75	4,89	2,3	2,6
1976	150,77	76,77	22,75	51,25	6,12	1,5	4,0
1977	154,38	81,20	22,80	50,38	5,83	3,1	2,7
1978	160,81	87,02	24,26	49,53	5,51	3,6	1,0
1979	175,95	93,83	26,10	56,02	5,85	2,3	3,6
1980	180,45	106,24	29,53	44,68	4,29	0,2	4,1
1981	188,13	112,16	31,81	44,16	3,90	-2,5	6,4
1982	188,60*	114,00*	32,00*	42,60*	3,70*	-0,4*	4,3
1983	198,25*	118,00*	32,50*	47,75*	4,10*	-0,7*	4,8

¹ Annual surplus plus interest expenditures.

² Interest revenues and other revenues.

³ Calculated according to the formula: $SV = \frac{AfaW_v}{AfaA_v} \cdot AfaA_b$; where:

AfaW = depreciations at replacement prices, AfaA = depreciations at purchase prices, v = economic sector (without apartment rental according to the NIA) and b = corporations included in the balance sheet statistics of the Deutsche Bundesbank.

⁴ Gross yield minus illusory profit and neutral yield.

⁵ Ordinary operating earnings in per cent of fixed assets at replacement prices.

⁶ Adjusted yield on fixed assets minus real interest (circulation yield on fixed-interest-bearing securities less the increase in the GNP deflator).

⁷ Yield on bonds outstanding less the increase in the GNP deflator.

*Estimated values.

Source: Deutsche Bundesbank, Jahresabschlüsse der Unternehmen in der Bundesrepublik Deutschland 1965 bis 1981, Special Publication No. 5 of the Deutsche Bundesbank, Frankfurt 1983. - Federal Statistical Office, Fachserie 18: Volkswirtschaftliche Gesamtrechnungen, Reihe 5: Revidierte Ergebnisse 1960 bis 1982, Stuttgart 1983. - German Council of Experts for the Appraisal of the Overall Economic Development, Ein Schritt voran, Jahresgutachten 1983/84, Bonn 1983. - Own calculations.

1960s, dwindled from the mid-1970s on to about 2 percentage points. It is above all this decline of the yield on fixed assets that is responsible for the weakness of investment that has persisted since 1974.

Since this is for the most part not wholly realized, other factors are mentioned as reasons for the low propensity to invest, e. g., the high-interest policy of the US, lack of new investment projects, excessive burdens on private enterprises through research and investment expenditures for new technologies and products, or simply an investment strike. In fact there is no lack of new investment projects. Also, companies were ready and able to take on such projects if the price relations were favorable. But a rising cost pressure and an ever decreasing flexibility in production due to restrictive employment regulations (Spinanger, 1983) have had the result that more and more projects are not profitable within Germany and are carried out abroad instead. The average annual increase of German direct investment abroad amounted to about 12 per cent from 1974 to 1981, whereas corporate investment (at current prices) increased at an annual rate of about 4 per cent.

The government has contributed considerably to this situation. It increased the burden on companies significantly by additional wage costs (social security contributions, etc.) and allowed production costs to rise enormously due to the many additional regulations with social or environmental intent.

Wage policies as well have contributed to the increased cost pressure in corporations. This is because unions and employers' association as a rule orient themselves in wage negotiations towards the development of artificially increased overall entrepreneurial profits. As has been shown, these profits stemmed less and less from actual production activity itself in recent years, but instead were generated predominantly through income from financial investments and from holdings.

The wage rounds have thus taken more and more the character of struggles between active partners of investment trust companies and self-appointed silent partners, who negotiate on the distribution of profits from holdings and from the possession of financial assets ("rentier income"). This had severe consequences for employment, since the wage settlements led, because of the considerably lower returns in production itself, to a persistently high or even rising cost pressure. The result was not only that more and more jobs were destroyed in the original area of activity of the company - i. e. in production - through rationalization measures, plant closures or even bankruptcies, the result was also that the readiness of corporations to invest in additional production capacities has decreased significantly.

It follows from all this that the preconditions for a revitalization of domestic investment activity are not so much lower real rates of interest but rather, and this above all, improved returns on fixed capital. That under such circumstances investment in new production capacities and products can be brisk even in times of high real rates of interest has been shown in Japan and in the USA. In 1979/80 Japanese trade unions accepted a decline of real wages by about 15 percent in order to compensate for the sharp price increases of imported raw materials (including oil). Thus, a deterioration of profits from production activities and a decline of employment, like the one after the first oil price hike, could be avoided in Japan. In the USA, real wages exhibited greater flexibility than in Germany or many other European countries due to a larger share of wage contracts on a company basis. In addition, the government promoted growth and employment by reducing taxes substantially, improving depreciation allowances and abolishing regulations in many areas. Giersch [1984] estimates that in restoring the incentives for economic growth the USA have a lead of about half a decade over Europe. The investment boom and the strength of the US-dollar indicate,

that the government succeeded in making it more attractive to put money in fixed assets than in government bonds. These examples demonstrate that progress in promoting growth and fighting unemployment will only be made in Germany if economic policy and wage policy give up their attempt to preserve present production and employment structures by additional interventions and regulations. Instead it is necessary to accept more flexibility with respect to income and prices, to get rid of legal barriers making investments unprofitable, and to support those who are economically successful and not to punish them by additional taxes or withdrawal of benefits.

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