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Determinants of the Rate of Return on Capital in German Corporations 1961 - 1975

by
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1. Introduction

In the past years several researchers have called attention to the decline of the rate of return on capital. The difference of these investigations is based on the following items:

1. the country for which the investigation is carried out;
2. the period of time covered by the investigation;
3. the computation of nominal or real rates of return;
4. the reference to equity or total capital and to return before taxes or after taxes;
5. the derivation of the results from macroeconomic data or firm data.

A decline of the rate of return on capital has been stated by Nordhaus (7) for the United States from 1948 to 1973, by King (4) for the United Kingdom from 1956 to 1973, and by Albach, Geisen, and Scholten (2) for the Federal Republic of Germany from 1960 to 1974.

Material on the development of the rate of return in Germany has also been presented by Conrad and Jorgenson (3) and by Saß (9). Conrad and Jorgenson care much about the estimation problems of the rate of return from macroeconomic data and about the computation of a real rate of return, the authors are not engaged in judging the time behavior of the rate of return. The last point has been taken up by Saß who tries to derive the influence factors of the profit rate for the period from 1953 to 1967. The work of Saß must be criticized with respect to several points. First, the author computes the denominator of the profit rate by adding fixed

assets and inventories while omitting financial assets (9, p.7); this leads to an overestimation of the magnitude of the profit rate. Second, results of multiple regressions are presented without testing the significance of the regression coefficients (9, p. 51).

It is an objective of our investigation to report on the development of the rate of return on capital in German stock corporations from 1961 to 1975. To that extent our results are similar to those of Albach, Geisen, and Scholten (2). The main objective is to explain the stated decline of the rate of return by regression analyses of time series for different industry groups. It will be shown that the rate of return is mainly influenced by the income distribution and the productivity of capital.

Results for the periods 1961 to 1972 have been presented in (6). We here report on the longer period from 1961 to 1975.

2. The Data

While Albach, Geisen, and Scholten refer to data of the individual stock corporations we use aggregated data published annually by the Federal Republic Statistical Office (12). Thus it is only possible to compute weighted averages for different industry groups due to the following explanation. If N_i is the value of a nominator for an individual stock corporation and D_i the correspondent denominator then the sums ΣN_i and ΣD_i are published by the Statistical Office. Then,

$$Z = \frac{\Sigma N_i}{\Sigma D_i} = \frac{\Sigma \frac{N_i}{D_i} \cdot D_i}{\Sigma D_i} \quad ,$$

which shows that Z is an average of the individual ratios weighted by D_i .

The data in (12) are published for more than 50 industry groups wherefrom we chose six subgroups of special importance and one main group:

- chemicals (CHEM)
- iron and steel (IRST)
- mechanical engineering (MECH)
- motor vehicles and aircraft (AUTO)
- electrical engineering (ELEC)
- textiles (TEXT)
- total manufacturing and construction (MFG) .

The first six industry groups are parts of MFG - but MFG contains further industry groups.

The number of firms included by the Statistical Office differs in each year from 1961 to 1975. This is due to the fact that only financial statements published up to a certain point of time are taken up. There is a diminution of stock corporations in Germany over time, too. Table 1 reports on the development of the number of firms included:

Table 1 :
Number of Stock Corporations
Evaluated by the FRG Statistical Office
1961 - 1975

Year	CHEM	IRST	MACH	AUTO	ELEC	TEXT	MFG
1961	81	66	130	19	45	141	1347
1962	89	67	142	21	56	147	1378
1963	84	71	145	22	54	141	1356
1964	83	73	143	19	57	141	1336
1965	79	71	135	21	51	125	1282
1966	75	71	129	20	46	129	1244
1967	72	64	122	17	42	124	1196
1968	68	60	119	17	35	121	1156
1969	68	52	113	16	34	114	1106
1970	66	49	109	13	34	102	1062
1971	62	45	102	15	36	102	1016
1972	57	42	101	15	31	88	950
1973	58	39	92	13	32	78	860
1974	51	36	87	15	32	72	836
1975	51	36	87	15	32	72	836

Source: (12), and "Wirtschaft und Statistik" 1975, 1976.

Although the number of firms changes year by year the Statistical Office reports the correspondent figures of the previous year, too. Thus relationships between variables can be computed on an average basis. This is of importance when computing rates of return. The rate of return may be computed by the sole year-end value of the capital figure in the denominator; otherwise, an average capital figure may be used. If firms increase equity by issuing new shares or by retained earnings, the application of the year-end equity value leads to a lower rate of return than the application of an average equity value.

Because the data for 1974 have been published without previous year's figures we computed all ratios by using year-end values. Thus there is a downward bias with respect to ratios containing stock variables. We should remark that many researchers use year-end values when computing rates of return.

3. The Selection and Computation of Rate of Return Variables

First, the different types of rate of return on capital must be defined. All figures are based on reported profits. We use the following three measures:

REQBT - rate of return on equity before taxes;

REQAT - rate of return on equity after taxes;

RTOTCA - rate of return on total capital before taxes.

A computation of a rate of return on total capital after taxes is not meaningful for the published

data because interest on debt is shown in the financial statements before deduction of taxes of the lender. We don't compute a real rate of return.

The developments of the three measures of rate of return are presented in Tables 2 to 4. These tables show the decline of the rate of return on capital since 1961 until 1975.

Table 2:
The Rate of Return on Equity before Taxes in Different Industry Groups 1961-1975 +

	1	2	3	4	5	6	7	8	9
	Industry group							Ø col. 2-7	Coeff. of var.
Year	MFG	CHEM	IRST	MACH	AUTO	ELEC	TEXT		
1961	22.4	24.4	17.3	28.o	5o.o	26.7	18.4	27.5	o.39
1962	21.3	22.5	13.5	26.4	55.3	22.9	17.7	26.3	o.29
1963	21.3	24.o	11.1	27.8	53.2	22.9	19.o	3o.3	o.45
1964	22.3	27.9	13.4	27.8	61.2	26.2	19.3	29.3	o.52
1965	2o.6	26.7	11.9	24.2	41.o	23.7	19.o	24.4	o.36
1966	18.7	23.3	8.6	2o.1	34.7	18.9	14.3	2o.o	o.4o
1967	15.9	19.9	7.2	19.6	27.o	19.3	12.5	17.6	o.36
1968	19.5	24.6	9.6	2o.6	35.3	26.6	15.7	22.o	o.37
1969	2o.6	24.o	14.o	2o.2	41.6	25.1	15.9	23.5	o.38
197o	18.8	15.4	18.8	16.9	29.5	27.3	8.7	19.4	o.37
1971	14.7	13.9	8.1	13.2	24.9	16.8	17.6	15.8	o.32
1972	17.o	17.3	6.1	14.o	35.8	23.6	17.8	19.1	o.48
1973	19.o	19.2	12.o	14.9	34.8	2o.9	13.7	19.3	o.4o
1974	16.4	21.9	22.5	11.o	9.1	11.o	12.4	14.6	o.37
1975	14.4	13.9	16.5	11.3	26.9	14.o	13.9	16.o	o.32

+ All computations were carried out by a PDP-1o at the computing centre of the University of Kiel.

Table 3:
The Rate of Return on Equity after Taxes in Different Industry Groups 1961-1975

	1	2	3	4	5	6	7	8	9
	Industry group							Ø col.	Coeff. of
Year	MFG	CHEM	IRST	MACH	AUTO	ELEC	TEXT	2-7	var.
1961	8.1	1o.5	6.o	9.4	18.9	13.5	4.7	1o.2	o.44
1962	7.8	1o.1	4.4	8.6	19.1	1o.6	4.4	9.3	o.5o
1963	8.2	11.2	2.8	9.o	2o.4	11.3	6.o	9.8	o.52
1964	8.4	12.5	4.4	8.5	25.7	12.8	6.4	11.2	o.58
1965	8.8	13.2	3.8	8.2	17.6	12.8	6.8	1o.2	o.42
1966	8.4	11.4	2.9	6.5	13.1	1o.2	3.9	8.1	o.44
1967	7.5	9.9	2.9	8.5	14.7	9.5	5.2	8.3	o.42
1968	8.7	11.6	4.5	8.1	15.2	13.5	6.3	9.7	o.37
1969	9.2	11.6	7.2	9.o	19.7	11.7	6.o	1o.6	o.39
197o	9.3	8.6	9.5	7.5	13.1	18.3	1.3	9.7	o.49
1971	6.5	6.8	3.3	5.5	12.6	7.8	7.o	7.1	o.37
1972	6.9	7.6	2.1	5.2	14.8	1o.5	6.3	7.6	o.49
1973	8.3	8.4	4.7	4.9	15.3	9.4	3.9	7.8	o.46
1974	6.o	9.4	8.9	4.3	-4.6	-o.5	2.9	3.8	1.24
1975	4.9	6.6	5.o	2.9	7.5	5.5	1.7	4.9	o.38

Table 4:
The Rate of Return on Total Capital before Taxes in Different Industry Groups 1961-1975

	1	2	3	4	5	6	7	8	9
	Industry group							Ø col. 2-7	Coeff. of var.
Year	MFG	CHEM	IRST	MACH	AUTO	ELEC	TEXT		
1961	9.9	12.8	8.5	8.4	19.2	1o.o	9.9	11.2	o.31
1962	9.4	12.2	6.5	7.9	2o.2	8.9	9.4	1o.6	o.4o
1963	9.4	12.7	5.8	8.8	2o.1	8.8	9.8	1o.8	o.39
1964	9.7	14.5	6.6	8.7	22.6	1o.3	9.7	11.7	o.41
1965	9.2	13.7	6.2	7.8	17.3	9.5	9.7	1o.5	o.34
1966	8.8	12.5	5.4	7.1	15.3	8.o	8.2	9.3	o.33
1967	7.9	11.o	5.2	7.3	13.2	7.5	7.7	8.5	o.29
1968	9.1	13.3	5.8	7.2	16.5	9.2	8.4	9.9	o.31
1969	9.2	12.9	7.5	6.4	18.o	8.6	8.2	1o.1	o.37
197o	8.5	9.2	9.1	6.1	12.9	9.6	6.3	8.8	o.24
1971	7.o	8.6	5.5	5.3	1o.8	6.8	9.3	7.6	o.25
1972	7.4	9.7	4.5	5.1	15.o	8.1	8.2	8.3	o.39
1973	8.6	1o.5	7.1	5.5	14.3	7.8	8.2	8.9	o.3o
1974	7.5	11.o	1o.3	4.6	4.5	5.1	8.4	7.3	o.34
1975	6.5	8.o	7.7	3.7	1o.5	5.8	7.8	7.1	o.28

Tables 2, 3, and 4 also report on the development of the coefficient of variation. This coefficient may be used as a measure of return differentiation between industries. Therefore - remembering the small number of only six industry groups - the question of similar return developments may be answered. The coefficient of variation ("Coeff. of var." in the tables) has been computed around the mean of columns 2-7 in each table. The results with respect to this coefficient don't show a trend in any direction. Thus these results differ from those obtained by Saß (9, p. 38) for the period from 1953 to 1967; Saß stated an increase in the coefficient of variation. We thus can conclude that there is no change in profit differentiation between industry groups from 1961 to 1975 - this statement is based upon the six industry groups included.

We only may detect a difference with respect to the business cycle. It seems to us that the uniformity of profit rates is greater in periods of recession than in boom periods.

The strong decline of the rate of return is demonstrated in a graphical manner by Figure 1. The cyclical fluctuation around the negative time trend clearly appears for the selected rates REQBT and RTOTCA in the main group MFG. The first order correlation coefficients between the three measures of rate of return and time are statistically significant in 17 of the 21 possible cases (three measures, seven industry groups).

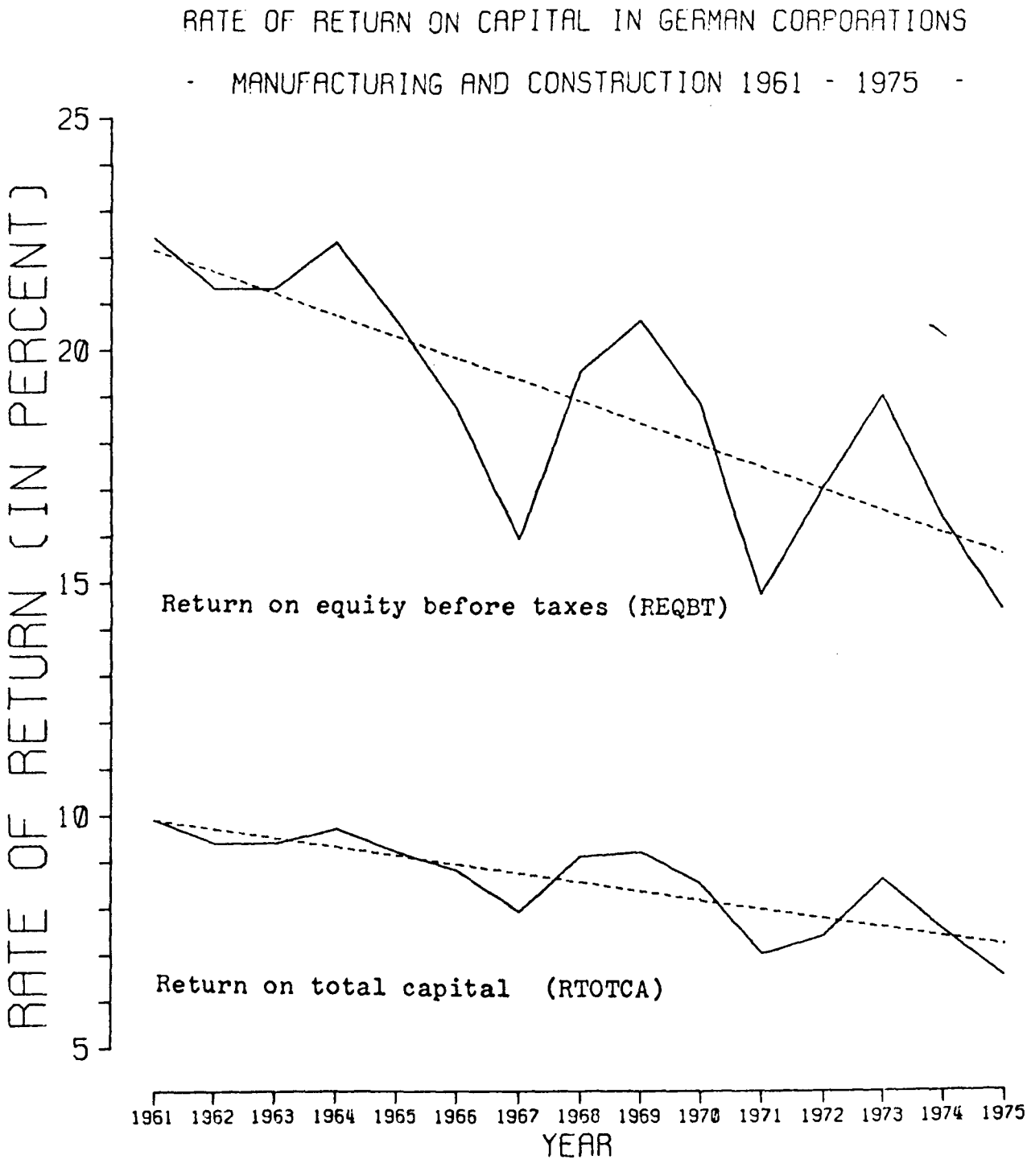
RATE OF RETURN ON CAPITAL IN GERMAN CORPORATIONS
- MANUFACTURING AND CONSTRUCTION 1961 - 1975 -
RATE OF RETURN (IN PERCENT)
25
20
15
10
5
Return on equity before taxes (REQBT)
Return on total capital (RTOTCA)
1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975
YEAR

Fig. 1

4. The Selection and Computation of Explaining Variables

The main objective of this paper - the explanation of the declining rates of return - presumes a selection of explaining variables. Inspection of the literature [especially (1), (2), (4), (7), (9), and (13)] led to a list of variables which are associated with the rate of return on capital.

The fundamental variables have been taken from Saß (9, p.53) who stresses on the following relationship on a macroeconomic basis:

$$\text{Rate of return on capital} = \frac{\text{Value added - Labor income}}{\text{Capital}} .$$

A reformulation of this formula leads to the formation of the rate of return on capital by two elements:

$$\text{Rate of return on capital} = \frac{\text{Value added}}{\text{Capital}} \cdot \left(1 - \frac{\text{Labor income}}{\text{Value added}}\right) .$$

Thus the rate of return on capital is the product of two factors:

- the capital productivity (CAPPRO - measured in monetary terms)
- the labor income quota (LABINQ) .

Further sets of variables have been chosen with respect to the influences of other factors (see 6, p. 65):

- strength of business cycle
- capacity utilization
- lifetime of fixed assets
- debt ratio
- magnitude of the borrowing rate
- percentage of fixed costs with respect to sales
- percentage of exports with respect to total sales
- terms of trade.

An inspection of the correlation matrices and factor analyses for each industry group - to be interpreted with caution because of only 15 observations - led to the conclusion (6, p. 65) that some variables refer to the same factor. The factor composition thereby differed between the investigated industry groups. We decided to use the following variables after having done the analyses.

1. LABINQ - Labor income as a percentage of total firm income. Here the problem is the definition of firm income. Kroenlein (5) deals with the possibilities of a derivation of firm income from the profit and loss statement. Albach, Fues, and Geisen (1) have computed the values of firm income composition for firms out of the Bonn sample. With respect to our data the problem is that there is the danger of double-counting with respect to interest income and to income from transferred profits. We assume that the major part of interest income results from other industry groups; otherwise we should have deducted interest income from

the estimated firm income. With respect to income from transferred profits we assume that this type mainly results from limited companies - thus a deduction from firm income must not take place. Firm income is thus estimated by the following elements of the profit and loss statement:

1. Labor income

   (wages and salaries, social security dues, old age relief and social aid costs)

2. Capital income

   (profit for the year, interest and similar expenses)

3. Government income

   (taxes on income, on yield and on net assets).

The figures for labor income as a percentage of total firm income are given in Table 5.

Table 5 .
Labor Income as a Percentage of Total Firm Income

Year	MFG	CHEM	IRST	MACH	AUTO	ELEC	TEXT
1961	72.7	64.7	74.3	80.1	64.6	78.4	79.6
1962	74.1	66.6	78.9	81.9	64.5	80.4	80.9
1963	74.0	66.2	80.7	80.4	65.6	80.7	80.4
1964	73.5	63.1	78.5	81.4	63.4	78.8	80.3
1965	74.6	64.0	80.4	83.1	68.5	80.9	80.3
1966	75.1	66.0	82.0	84.6	71.3	83.3	82.9
1967	76.0	67.4	82.1	83.7	73.6	84.8	83.1
1968	73.2	62.2	80.9	83.6	70.5	81.6	82.1
1969	72.9	62.3	76.2	84.3	69.9	81.5	83.1
1970	76.1	71.0	73.8	84.7	78.8	79.3	87.5
1971	79.9	73.1	82.7	86.3	82.7	85.1	82.9
1972	78.4	70.9	83.7	86.6	77.4	82.4	84.7
1973	76.4	71.0	80.1	86.1	79.9	83.3	85.5
1974	80.0	72.4	74.8	87.5	93.0	89.1	85.7
1975	81.7	77.5	78.9	88.6	84.7	87.6	86.5

Inspection of Table 5 shows the continuous increase in the labor income quota since 1961. The variable LABINQ was computed by deduction of interest and transferred income (discussion see above), too. These computations resulted in about 90% LABINQ in 1975 which seems to be too high. Therefore, the estimation method leading to Table 5 - [cf. the results in (1), too] - seems to be adequate.

2. CAPPRO - Capital productivity;
this variable is computed by division of estimated firm income by total capital.

3. DEBTR - Debt ratio;
the variable is defined by the relation between total debt and total capital.

4. FIXCOS - Fixed Costs as a percentage of sales (whereby fixed costs are estimated by labor income plus depreciation).

5. TERMS - Terms of trade (i.e. index of export prices divided by index of import prices). The data have been taken from (11).

6. CAPACU - Capacity utilization (utilization of the potential of production). The data have been taken from (8, p. 47).

7. TIME - Year;
this variable has been used as a proxy for time-dependent influences not represented by the variables 1 to 6. Most of the regressions don't refer to this variable.

The values of variables 1 to 5 where collected for each industry group while the CAPACU variable takes the same values for each industry group.

5. The Results

Multiple regression analyses have been carried out by using a modified version of the IBM-SSP multiple regression program. The results are reported in Tables 6 to 12 for each industry group. In these tables every column represents the results of one regression, i.e.

- size of intercept
- size of regression coefficient with asterisk indicating the level of significance
- coefficient of determination (percentage of variance explained)
- F-value for the coefficient of determination with asterisk indicating the level of significance
- Durbin-Watson-ratio indicating a lack of auto-correlation.

Table 6 : Results of Multiple Regressions
- Rate of Return 1961 - 1975 for Total Manufacturing and Construction -

	Rate of return on equity before taxes (REQBT)	Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)	
Intercept	44.95	11.26	27.18	26.69
LABINC	-0.87^{++}	-0.27^{++}	-0.36^{++}	-0.36^{++}
CAPPRO	0.99^{++}		0.24^{++}	0.25^{++}
DEBTR				
FIXCOS				
TERMS	0.05^{+}			0.003
CAPACU		0.18^{++}		
TIME				
R^2	0.982	0.922	0.999	0.999
F-value R^2	178.12^{++}	37.22^{++}	3791.15^{++}	2710.39^{++}
DW	2.160	1.759	1.697	1.877

$^{+}$ level of significance 0.05
$^{++}$ level of significance 0.01

The results for the rate of return on capital in the main industry group MFG (see Table 6) show the important influences of income distribution by the fact of the negative sign of the LABINQ variable. An inspection of the standardized regression coefficients - not being presente here - leads to the conclusion that the labor income quota must be regarded as the main factor of the declining rates of return. This is valid for all measures of rate of return on capital and for all industry groups investigated here - there is only one exception of this statement [see Table 9 (mechanical engineering)].

A second significant variable is the CAPPRO variable. The positive sign in the regressions is expected. It means that firms increased profitability by achieving a higher ratio of firm income with respect to total capital employed. On the other side, if a rising labor income quota coincided with diminishing capital productivity then the decline in the rate of return was accelerated. An increase in capital productivity - as defined by CAPPRO in monetary terms - should be reached by introducing new technologies and new products because it will be difficult to obtain the same results by old products and by accepting the given situation of competition.

The positive sign of the TERMS variable shows the importance of foreign trade for German firms.

The fact that the CAPACU variable is of minor importance - also in the regressions for other industry groups - seems to be due to cyclical components within the other variables. Thus the fluctuation around the negative trend [see Figure 1] can be explained without referring to CAPACU in many cases.

The results for the industry groups CHEM, IRST, MECH, AUTO, ELEC, and TEXT are similar to those for MFG [see Tables 7 to 12]. But there are two differences:

First, the debt ratio variable has come out significantly in several regressions - and the sign of this DEBTR variable is positive in all but one cases. Because of the rising debt ratios since 1961 this means that firms did try to rise profitability by rising their debt ratios. But the desired result has not been reached because of the stronger influence of the rising labor income quota. Now the firms have high debt ratios and low profitability [see (10) for this] - resulting in a greater risk of the capital structure.

Second, the CAPACU variable takes negative signs for the iron and steel industry. This seems to be due to the uniform measure of capacity utilization used for all industry groups. The cycle in IRST differs from the general business cycle leading to the negative sign of the regression coefficient.

Table 7: Results of Multiple Regressions
- Rate of Return 1961 - 1975
for Chemicals -

	Rate of return on equity before taxes (REQBT)	Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)	
Intercept	39.49	196.26	25.57	64.46
LABINC	-0.74^{++}	-0.80^{++}	-0.37^{++}	-0.32^{++}
CAPPRO	0.89^{++}	0.86^{++}	0.26^{++}	0.34^{++}
DEBTR		0.26^{++}		
FIXCOS				
TERMS				0.03^{++}
CAPACU				0.02^{++}
TIME		-0.08^{+}		-0.02^{++}
R^2	0.998	0.999	0.959	1.000
F-value R^2	1359.12^{++}	1279.10^{++}	74.39^{++}	6915.09^{++}
DW	2.721	2.788	1.418	1.733

+ level of significance 0.05
++ level of significance 0.01

Table 8: Results of Multiple Regressions
- Rate of Return 1961 - 1975
for Iron and steel -

	Rate of return on equity before taxes (REQBT)		Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)	
Intercept	165.48	109.07	25.85	46.64	30.46
LABINC	-1.43^{++}	-1.45^{++}	-0.48^{++}	-0.43^{++}	-0.38^{++}
CAPPRO					
DEBTR		0.59^{++}			0.17^{++}
FIXCOS					-0.15^{+}
TERMS			0.17^{++}	0.07^{+}	
CAPACU	-0.41^{+}	-0.21^{+}		-0.14^{+}	
TIME					
R^2	0.951	0.985	0.970	0.959	0.982
F-value R^2	61.55^{++}	140.29^{++}	103.98^{++}	49.50^{++}	113.91^{++}
DW	1.421	2.110	1.979	1.962	1.939

+ level of significance 0.05
++ level of significance 0.01

Table 9: Results of Multiple Regressions
- Rate of Return 1961 - 1975
for Mechanical engineering -

	Rate of return on equity before taxes (REQBT)	Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)	
Intercept	95.66		25.67	53.35
LABINC				-0.42^{++}
CAPPRO				
DEBTR				0.14^{++}
FIXCOS	-2.00^{++}		-0.50^{++}	
TERMS				
CAPACU				
TIME				
R^2	0.953		0.924	0.990
F-value R^2	11.29^{++}		8.71^{++}	321.04^{++}
DW	1.436		1.290	1.124

+ level of significance 0.05
++ level of significance 0.01

Table 10: Results of Multiple Regressions
- Rate of Returns 1961 -1975
for Motor vehicles and aircraft -

	Rate of return on equity before taxes (REQBT)		Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)
Intercept	72.99	104.55	55.65	48.50
LABINC	-1.76^{++}	-1.08^{++}	-0.87^{++}	-0.62^{++}
CAPPRO	0.74^{++}	1.18^{++}	0.40^{+}	0.26^{++}
DEBTR	0.80^{++}			-0.05^{+}
FIXCOS		-1.94^{++}		
TERMS				
CAPACU				
TIME				
R^2	0.997	0.993	0.934	0.999
F-value R^2	736.36^{++}	315.00^{++}	44.31^{++}	2060.33^{++}
DW	1.989	2.539	1.646	1.615

+ level of significance 0.05

++ level of significance 0.01

Table 11: Results of Multiple Regressions
- Rate of Return 1961 - 1975
for Electrical engineering -

	Rate of return on equity before taxes (REQBT)	Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)
Intercept	104.46	69.82	37.94
LABINC	-1.84^{++}	-1.49^{++}	-0.46^{++}
CAPPRO	0.75^{++}	0.76^{+}	0.18^{++}
DEBTR	0.48^{++}	0.39^{+}	
FIXCOS			
TERMS			
CAPACU			
TIME			
R^2	0.988	0.932	0.999
F-value R^2	181.40^{++}	29.00^{++}	4776.22^{++}
DW	1.870	1.955	2.301

+ level of significance 0.05
++ level of significance 0.01

Table 12: Results of Multiple Regressions
- Rate of Returns 1961 - 1975
for Textiles -

	Rate of return on equity before taxes (REQBT)		Rate of return on equity after taxes (REQAT)	Rate of return on total capital before taxes (RTOTCA)	
Intercept	112.37	108.10	42.23	49.23	41.04
LABINC	-1.38^{++}	-1.85^{++}	-0.51^{++}	-0.61^{++}	-0.50^{++}
CAPPRO	0.35^{+}				0.15^{++}
DEBTR		0.52^{++}		0.16^{++}	
FIXCOS					
TERMS		0.31^{+}			
CAPACU					0.02^{++}
TIME					
R^2	0.899	0.971	0.701	0.966	0.999
F-value R^2	27.63^{++}	70.48^{++}	3.54^{++}	89.68^{++}	2679.75^{++}
DW	1.940	1.893	1.268	1.542	1.793

+ level of significance 0.05
++ level of significance 0.01

6. Conclusion

The results of our investigation can be summarized:

1. For the seven industry groups studied, there has been a strong negative influence of the labor income quota on the rate of return within the period 1961 - 1975.
2. Further important and significant factors are capital productivity and debt ratio.
3. The statistically high quality of the results seems due to the fact that microeconomic and macroeconomic variables have been combined and that factor analyses have been carried out before running the multiple regressions.

The implication of this study is the question whether firms behaved well by rising their debt ratios. Now high debt ratios are found together with low profitability. A strategy of rising capital productivity would have been an alternative with respect to the aim of maintaining proper profit rates. Because of the high risk of capital structure - induced by increased debt ratios - it will be much more difficult to follow the risky strategy of increasing capital productivity in the future.

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