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QUARTERLY NATIONAL ACCOUNTS IN WESTERN GERMANY

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I. A SHORT HISTORY

QUARTERLY accounts were started in Germany in spring 1951, about a year later than the (official) annual accounts. This rapid succession may seem somewhat strange, but it was really no more rapid than other things in Germany in those days. 'Nachholbedarf' (catching-up demand) in the standard of living stimulated the economy; Nachholbedarf in national accounts stimulated the statisticians and practising economists. With the beginning of the Third Reich the promising beginnings of national accounting had been suppressed. Now its collapse released a stream of economic analysis and statistical work in this field. In addition, the demands of the OEEC resulted in the computing of yearly and half-yearly figures for 'G.N.P. by industrial origin' and 'G.N.P. by use' by the Federal Statistics Office (Statistisches Bundesamt). Finally, the still far from bright economic situation in 1951 brought the last step: quarterly accounts.

In the Berlin Institute (Deutsches Institut für Wirtschaftsforschung), Ferdinand Grünig, who in the last days of the Weimar Republic did much pioneering work in preparing (and analysing) yearly accounts, began publishing current quarterly presentations of the sources of income, its redistribution and its use. For the economy of West Berlin, which after the blockade of 1948–9 was at the point of collapse with an unemployment ratio of 33 per cent of the (skilled) labour force, Grünig and Rolf Krengel had no time to wait for yearly data before computing quarterly national accounts figures: the third quarter of 1950 became the basic period for the Berlin Long-Term Plan of 1951. Thus in 1951 the Berlin Institute started regular publication of quarterly accounts for Western Germany and West Berlin; publication of the West Berlin accounts was transferred to the *Land* Statistics Office (Statistisches Landesamt), Berlin, in 1955. These accounts proved so indispensable in short-term diagnosis that the Ifo Institute in Munich also began estimating

a complete set of quarterly accounting data in 1954; the Rhenish-Westphalian Institute followed in 1957 with a much more limited number of accounts.[1]

II. THE QUARTERLY DATA AND ESTIMATING SYSTEM

Limiting ourselves to the Berlin Institute's quarterly data and estimating system which the author feels more competent to deal with and which is more extensive than the others, we shall describe its structure as it is today. Supplementary tables include the breakdown of the G.N.P. into industrial groups (thirteen branches) and into types of gross (before tax) income (four aggregates); there are additional tables of prices, aggregates in real terms (for G.N.P. by use, nine aggregates) and net (after tax) income shares (five types); and also a breakdown of the employed labour force and its gross wage averages into industrial groups (seventeen branches). The main set of tables shows the flow of income and expenditure between the five accounts: 'private and public enterprises', 'private households', 'general Government', 'international transactions' and 'capital formation'.

The expenditures in the 'enterprise' account are revenues for the other four accounts and vice versa. Each sector receives revenues in the form of factor income and of transfers and itself transfers income to other sectors. Net flows of income and expenditure are computed for each account to obtain a more consolidated and therefore for the user more intelligible set of data.

The balancing total of the enterprise account is the gross national product at market prices. Its revenues are divided into the familiar 'G.N.P. by use' aggregates (private consumption, etc.); and its expenditures are net wages, distributed and undistributed net profits (of unincorporated and incorporated firms), taxes and depreciation. Net wages and distributed profits are transferred to 'private households'; undistributed profits and depreciation to 'capital formation'; taxes (social insurance contributions included) go to the general Government account.

[1] See my paper for the Seventh General Conference of the International Association for Research in Income and Wealth, Tutzing, Germany: 'National accounts as an instrument of economic analysis in German institutes of economic research', published (together with the other contributions concerning national accounting in Germany to the Tutzing Conference) in *Konjunkturpolitik*, Vol. 7, No. 5, 1961, Duncker & Humblot, Berlin.

The 'private households' are disaggregated into net wages, distributed profits and six types of transfers on the revenue side, and into two types of saving and five types of consumption on the expenditure side. The international transaction account is divided into goods, services, net lending and net transfers to other nations and other German regions. The capital formation account on the expenditure side is broken down into fixed assets of six industrial groups, change in stocks, net lending to other countries; on the income side it is disaggregated into depreciation, undistributed profits, tax-financed Government investment, use of own funds by private households for investment in owner-occupied dwellings and, finally, net borrowing for capital formation and a statistical difference. The sum of net borrowing results from quarterly studies of money flows which play a part in controlling the production and income data and which are also published in the quarterly reports of the Berlin Institute.[1] The whole set of flows of income and expenditure includes about seventy series. With the exception of some data of net income, definitions are the same as in the much more extensive annual accounts of the Federal Statistics Office.

Estimating starts with the 'contributions to G.N.P.' of the different industrial groups, goes through the whole bulk of income data (exception: net profits) and ends for the present with the series 'G.N.P. by use' (exception: the change in stocks). In Germany there are enough monthly and quarterly service data and indicators at hand to cover 75 per cent of G.N.P. by industrial origin, 70 per cent of G.N.P. by type of income and 66 per cent of G.N.P. by use. The residuals in the first approach are certain types of services; in the second net profits; and in the last changes in stock. Because of the higher ratio of available data the first approach, using the production data, is chosen to reach the actual G.N.P. An approximate calculation is made for the missing services. The results produce first figures for the G.N.P. and the other two residuals net profits and changes in stocks.[2]

If the time sequence of the residuals and their cross-sectional

[1] For much more detailed description of definition and methods of estimation, see 'Volkswirtschaftliche Gesamtrechnung für die Bundesrepublik Deutschland – Vierteljahrszahlen 1950 bis 1960', by Klaus Dieter Arndt and Oskar de la Chevallerie, in 'Sonderheft Nr. 59' of the Deutsches Institut für Wirtschaftsforschung, Berlin.

[2] Even if statistical material for short-term profit or stock changes were available (which it is not), its reliability would be very doubtful.

interdependence seem to be 'reasonable and conclusive', they are assumed to be right. If they fail this 'test', and this is the rule, the possible errors in the other previously estimated data must be traced and corrected to get plausible figures for the residuals. If this check is not successful, the initially doubted estimates of profits or stocks must be accepted and used for the economic analysis. In some cases it cannot be stated definitely before the next quarter whether an irregularity took place or a turning-point appeared.

Thus, the quarterly series of the Berlin Institute should not be called a 'statistic'.[1] Stated fairly, it is a combination of weighted indicators of 'statistics' and of residual entries, which really depends on the iterative controls described above. Success in outcome is never sure and Table I shows the degree of intuition reflected in the estimates. To some extent this can be improved by more basic data, especially on stocks, but even then judgement will always play an important role in computing quarterly data. That the outcome in terms of revisions was relatively satisfying in the past – as will be seen later – is to a high degree a reflection of the steady growth of the German economy. Errors in inventory estimating might have been fatally large in a stagnating economy. But because it is one of the goals of quarterly accounts to help to avoid stagnation and to preserve a high rate of growth, this reasoning is somewhat circular: to the extent that the instrument provides a better base for economic analysis and economic policy than isolated indicators could, the instrument contributes to conditions which make it more reliable.

The quarterly account data of the Berlin Institute are not adjusted for seasonal movements. This refinement will take place later this year when the anticipated revisions of the official annual accounts since 1950 are complete. Up to now the lack of

[1] In the traditional sense of the arrangement of collected data only. None of the German quarterly series, mentioned on p. 214, can rely on collected data only. They all have to overcome by estimation the lack of surveys in inventories, profits and production of services which reflect personal views of the actual state of business. Therefore, especially at turning-points, the first estimates of the three research institutes may differ sharply. But out of the fast-growing number of trained users of the quarterly series in Germany nearly all favour the competition of different views with different policy recommendations and dislike the semi-official and possibly totally misleading statement of a single institute as in prewar times. To avoid confusion in prior-to-present-year data all institutes adopt the annual figures of the statistical office and meet regularly in order to standardize their quarterly series.

seasonally adjusted data has not proved to be very serious for economic analysis. In a relatively fast-growing economy comparisons of quarter-to-quarter change can be replaced by comparisons of same-quarter-a-year-ago change.

III. A QUANTITATIVE APPRAISAL

Methods and criteria used in testing the reliability of the quarterly figures are as follows:

1. All figures for which the tests have been constructed have been published.
2. First published estimates are checked on last published estimates.
3. Revisions are shown in relation to level and change of data. Change is defined here as same-quarter-a-year-ago change.
4. Relative revisions are computed for the whole period under observation and are arranged in the form of mean and maximum differences for the forty-eight quarters 1950–61, both inclusive.
5. Differences in six critical quarters of turning-points are considered separately.
6. Differences between the first and last estimates result from revisions due to (*a*) changes in definitions and (*b*) improvements of the official yearly accounts. These differences are shown separately in the revisions relating to level.
7. Adjustment of the original differences for reasons named in 6 has not been made in the change data; in contrast to level data they have been, heretofore, much less influenced by modifications in definition or in the level of annual data.
8. Direction of revisions is shown for level and for change data.

Table II shows by means of the quarterly figures for the G.N.P. the way in which the error calculations were carried out. The time-lag between the published figures is in general six to eight quarters; as mentioned above, the first estimate is checked on the last and only published figures are compared. Therefore, even the last-published estimate is not a final figure. Revisions can still be made even after eight quarters. Thus, for example, in autumn 1963 the Federal Statistics Office's yearly data since

1950 will be thoroughly revised. Limiting the time span of the test to a constant of six to eight quarters is necessary in order to average differences over the whole observation period: otherwise, that is, in computing averages from revisions relating to time intervals from (in this case) six to fifty-four quarters, the interpretation of test data would be somewhat difficult.

To be sure, in limiting the time span for which revisions are counted, all corrections of data outside the six to eight quarter lag are hidden safely in the darkness beyond. But before judging finally whether this procedure is tolerable we should at least remember the goals of the German quarterly accounts. They are tools of short-term analysis and policy formation (forecasting included) and for measurements for this particular purpose it is necessary to restrict the appraisal to a short-term lag (even six quarters may be too extensive for the test, because to fulfil the task for which quarterly accounts in this country are constructed the difference of the first from the second estimate is really decisive).

In order to do justice to our quarterly figures we cannot stop here. The testing of the quarterly data also demands the elimination of the influence of revisions in the yearly accounts. To avoid confusion the official annual estimates are used as benchmarks for the quarterly calculations. However, the revisions in these annual data should not be considered as errors of the quarterly accounts proper. Even a statistics office in comparing the reliability of quarterly accounts with those of the annual estimates would wish to separate out the errors of the annual estimates in order to ascertain the additional errors of the quarterly.

A major revision of the annual data took place in the spring of 1957, and, of course, then led to heavy deviations of the first estimates from the last ones for those quarters which were published *after* the revision, but which refer to dates *before* the revision. Other corrections were made because of current adjustments to changes of annual data of the Statistics Office. The differences thus arising are given in the adjustment column.[1]

If the adjusted figure is taken as an actual error, error ratios between 0·5 and 4 per cent appear, with the exception of the

[1] In aggregates other than the G.N.P. the revisions mentioned above are more numerous, as in time the composition of some of the components on the 'use' or 'origin' and above all the 'income' sides of the national product have changed.

undistributed profits and stock changes, for the average of the total period (Table III). As against this, average error ratios for stock changes and undistributed profits were quite considerable at 40 per cent and 10 per cent. In the stock changes, however, it must be remembered that this is a very small aggregate, so that even smaller absolute changes in relation to the initial figure have a relatively strong effect. The absolute sum of revisions in the average of the entire period was both for undistributed profits and stock changes not more than DM 500 million.

Table III also gives maximum differences. In several cases the accuracy can scarcely be considered adequate for trend analysis. Maximum differences concentrate noticeably in the third quarter of 1950 and in various quarters of 1959. It would therefore be useful to know whether these are also quarters denoting a turning-point in economic activity in Germany.

It is not simple to define this turning-point, for all aggregates do not accelerate or decelerate at once, so that determining it is never completely objective. As criteria the movements of the following aggregates were considered:

Contribution of manufacturing to G.N.P.,
G.N.P. itself in current and in constant prices,
Gross wages,
Gross profits,
Undistributed profits,
Total asset formation (net).

These aggregates tended to accelerate mainly in the quarters III/50, III/54, II/59, and to decelerate in the quarters III/51, III/56, III/61. For each of these two three-quarter groups the average error ratio was calculated (Table IV). It shows that the average error ratio was higher *at the beginning* of a boom than that of the average of all forty-eight quarters, though much lower than that of the maximum differences. The average error ratio of the three quarters *at the end* of a boom was altogether no greater than that for all forty-eight quarters. This divergence is due to there being only one quarter with a maximum difference (III/50) in the first group. Altogether the error ratio in the turning-point quarters turned out to be surprisingly low. If it is remembered that the calculation of the third quarter of 1950 coincided with the period of the first experiments in quarterly accounting, it may be said that the accuracy was

not less than in the average for all forty-eight quarters.

The Institute's trend analysis is based mainly on comparison of yearly growth rates. Accuracy in the change of an aggregate is therefore of the greatest importance. Corrective adjustment of the published figures is, in contrast to revision of level, less necessary in the adjustment for change, as the initial data are with negligible exceptions based on consistent series.

The error ratios of the same-quarter-a-year-ago change have been calculated in relation to the corresponding last-published estimate of level and last-published estimate of change (Table V). It will be seen that the average differences (ignoring sign) between the first and last estimates of change (that is, the revisions) are small, but since the changes themselves are small, on average, even minor revisions may represent a large percentage error of the estimates of change. Thus the average revision in the same-quarter-a-year-ago change was only DM 100 million for imports, agriculture, construction, depreciation and fixed capital formation; but the revisions as a percentage of the last estimates of change of each of these categories was 18 per cent, 43 per cent, 18 per cent, 21 per cent and 19 per cent respectively.[1] We conclude that error ratio of change in relation to the last value of change is too severe a test of reliability. By contrast the revisions as a percentage of the last value of level are, of course, much smaller and similar to those of the adjusted-level data in Table V.

In Table VI the number of revisions in level and in change is given. The aggregates in which revision was often quite unnecessary (because of the high quality of the current statistics) are on the 'origin' side 'Agriculture' and 'Construction', on the 'income' side 'Net Wages' and 'Depreciation', on the 'use' side 'Private Consumption', 'Gross Fixed Investment', 'Exports' and 'Imports'. The number of revisions was especially high in the residual items 'Net Profits' and 'Stock Changes'. Upward revisions are in the majority. Still, the dispersion in the series adjusted is not so one-sided as to give discouraging results.

The results of the test surely allow the deduction that the accuracy of calculation of level and change figures in the quarterly account, except for stock changes and undistributed profits, was satisfying on average during the period under

[1] In most cases the rounding of the numerator and the denominator of the small change variables has contributed to the size of the percentage ratio.

observation. Whether it will ever be possible to create statistical primary material for the development of undistributed profits with satisfactory representation for the total economy must be doubted. Short-term stock statistics would, on the other hand, probably be able to raise the accuracy of the account. The uncertainties in the estimate of both aggregates, however, even in the turning-points, did not lead to intolerable errors in estimating the G.N.P., because their weight is relatively slight and larger errors were avoided by the structural controls in the quarterly account. This, however, means that in the event of a stagnating economy with a heavy weight of stock changes the limits of error possibly exclude a reliable statement, at least on the basis of only one quarter's results. For this event there is in Germany fortunately no test material.

TABLE I

Nature of source material used in the estimates of quarterly accounts for Western Germany in 1961

	First estimates based on[1]				Total
	Survey data and indicators		Tentative assumptions, judgements and residuals[2]		
	mrd. DM	% of total	mrd. DM	% of total	mrd. DM
G.N.P. by industrial origin	*232·4*	*75*	*78·0*	*25*	*310·4*
Agriculture, forestry, fishing	7·3	41	10·4	59	17·7
Other goods	148·5	88	21·2	12	169·7
Mining, energy	14·8	100	—	—	14·8
Manufacturing	118·4	89	14·6	11	133·0
Construction	15·3	70	6·6	30	21·9
Services	77·3	62	46·7	38	124·0
Wholesale and retail trade	35·0	85	6·2	15	41·2
Transport, communications	12·0	60	7·9	40	19·9
Banking, private insurance	—	—	10·5	100	10·5
Housing	8·9	100	—	—	8·9
Public services	21·4	91	2·1	9	23·5
Other services	—	—	20·0	100	20·0
Net foreign income (./.)	0·7	66	0·3	34	1·0
G.N.P. by type of income	*218·8*	*70*	*91·6*	*30*	*310·4*
Net wages	93.6	84	17·8	16	111·4
Net profits	—	—	61·4	100	61·4
Transfers from Government	40·4	90	4·5	10	44·9
Disposable income of Government	59·1	90	6·6	10	65·7
Depreciation	25·7	95	1·3	5	27·0

TABLE II (*continued*)

G.N.P. by use	*204·6*	*66*	*105·8*	*34*	310·4
Private consumption	116.5	66	59·7	34	176·2
Public consumption	21·4	49	22·3	51	43·7
Gross fixed capital formation	58·5	75	19·4	25	77·9
Equipment	31·0	80	7·7	20	38·7
Construction	27·5	70	11·7	30	39·2
Changes in stocks	—	—	5·8	100	5·8
Exports	68·9	93	5·0	7	73·9
Imports	60·7	90	6·4	10	67·1

[1] Example: Of wages (gross) 48 per cent are based on survey data (part of manufacturing and construction); 36 per cent are represented by combined indicators such as wage agreements, employment, wage indexes (energy, trade, banking, transport, public services); 16 per cent of the wage total (agriculture, minor part of manufacturing and construction, private services) are based on estimates of the effect of the wage trend in general and in related branches.

[2] Including the weight of a missing month of survey data and indicators.

TABLE II

Quarterly gross national product figures[1]

Revisions[2] *in level 1950–61 (forty-eight quarters)*

Reference quarter		First estimate		Last estimate		Lag in publication	Differences in		Relative revisions	
		mrd. DM	Quarter of publication[1]	mrd. DM	Quarter of publication[1]	Quarters	Unadjusted	Adjusted[3 4]	Unadjusted	Adjusted
									% of the last value	
1950	I	20·6	1/51	20·1	2/52	5	−0·5	−0·5	−2	—
	II	21·8	1/51	21·2	3/52	6	−0·6	−0·6	−3	—
	III	24·6	1/51	23·6	4/52	7	−1·0	−0·6	−4	−2
	IV	26·4	1/51	25·4	4/52	7	−1·0	−0·7	−4	−1
1951	I	25·8	2/51	25·8	1/53	7	0	+0·1	—	−0
	II	27·2	3/51	27·5	2/53	7	+0·3	+0·2	+1	+0
	III	28·2	4/51	28·7	3/53	7	+0·5	+0·2	+2	+1
	IV	30·7	1/52	31·4	4/53	7	+0·7	+0·3	+2	+1
1952	I	29·2	2/52	29·7	4/53	6	+0·5	+0·3	+2	+1
	II	30·3	3/52	30·5	1/54	6	+0·2	+0·1	+1	+0
	III	32·3	4/52	32·0	2/54	6	−0·3	—	−1	−1
	IV	34·0	1/53	33·7	3/54	6	−0·3	—	−1	−1
1953	I	31·2	2/53	31·0	4/54	6	−0·2	—	−1	−1
	II	32·7	3/53	32·8	4/54	5	+0·1	—	+0	+0
	III	33·8	4/53	34·5	1/55	5	+0·7	+0·3	+2	+1
	IV	35·5	1/54	36·0	2/55	5	+0·5	+0·1	+1	+1
1954	I	32·4	2/54	33·0	4/55	6	+0·6	—	+2	+2
	II	34·9	3/54	35·4	4/55	5	+0·5	—	+1	+1
	III	37·3	4/54	37·4	2/56	6	+0·1	+0·1	+0	—
	IV	39·5	1/55	39·6	3/56	6	+0·1	+0·1	+0	—
1955	I	37·0	2/55	37·0	2/57	8	0	—	—	—
	II	39·8	3/55	40·2	2/57	7	+0·4	—	+1	+1
	III	42·2	4/55	42·2	2/57	6	0	—	—	—
	IV	44·5	1/56	44·6	2/57	5	+0·1	—	+0	+0

TABLE II (*continued*)

Reference quarter	First estimate		Last estimate		Lag in publication	Difference in		Relative revisions	
	mrd. DM	Quarter of publication[1]	mrd. DM	Quarter of publication[1]	Quarters	Unadjusted	Adjusted[3 4]	Unadjusted	Adjusted
								% of the last value	
1956 I	41·4	2/56	44·0	2/58	8	+2·6	+2·6[3]	+6	—
II	44·9	3/56	47·3	3/58	8	+2·4	+3·1[3]	+5	−1
III	45·4	4/56	49·5	4/58	8	+4·1	+4·1[3]	+8	—
IV	48·5	1/57	52·6	4/58	7	+4·1	+4·2[3]	+8	−0
1957 I	45·3	2/57	48·5	2/59	8	+3·2	+3·1[3]	+7	+0
II	51·3	3/57	51·3	3/59	8	0	—	—	—
III	53·5	4/57	53·7	4/59	8	+0·2	—	+0	+0
IV	55·9	1/58	56·1	4/59	7	+0·2	—	+0	+0
1958 I	51·7	2/58	51·7	4/59	6	0	—	—	—
II	54·2	3/58	55·7	1/60	6	+1·5	+1·4	+3	+0
III	57·0	4/58	58·0	2/60	6	+1·0	+1·5	+2	−1
IV	59·3	1/59	60·6	3/60	6	+1·3	+1·6	+2	+0
1959[5] I	54·0	2/59	55·9	4/60	6	+1·9	+1·8	+3	+0
II	58·5	3/59	60·7	1/61	6	+2·2	+1·9	+4	+0
III	62·5	4/59	64·7	2/61	6	+2·2	+1·9	+3	+0
IV	67·6	1/60	68·7	3/61	6	+1·1	+1·9	+2	+0
1960[5] I	63·9	2/60	65·0	4/61	6	+1·1	+1·0	+2	+0
II	68·2	3/60	69·0	1/62	6	+0·8	+0·8	+1	—
III	71·4	4/60	71·9	2/62	6	+0·5	+0 4	+1	+0
IV	76·2	1/61	76·2	3/62	6	0	+0·4	—	−1
1961[5] I	72·9	2/61	73·4	4/62	6	+0·5	+0·4	+1	+0
II	75·8	3/61	76·2	1/63	6	+0·4	+0·2	+1	+0
III	78·2	4/61	78·1	1/63	5	−0·1	+0·2	−0	−0
IV	82·4	1/62	82·7	1/63	4	+0·3	+0·2	+0	+0

[1] Source: *Vierteljahrshefte zur Wirtschaftsforschung 1951–1963*, Duncker & Humblot, Berlin.
[2] Differences between the first and the last *published* values.
[3] Differences because of five changes in the Berlin Institute's definitions of subtotals (not relevant for the G.N.P.) and because of adapting the quarterly figures in I/56–I/57 to the 'major revision of 1957' of yearly data by the Statistics Office.
[4] Differences because of adapting the regular revisions of the yearly (from 1950 to 1955 half-yearly) data of the official accounts.
[5] Since III/59 Saarland included.

TABLE III

Revisions [1] [2] in level 1950–61: mean and maximum differences

	Mean differences (forty-eight quarters)[3]			Maximum differences			
	Unadjusted		Adjusted[4]	Unadjusted		Adjusted[4]	Reference quarter
	Regardless of sign						
	mrd. DM	% of the last value		mrd. DM	% of the last value		
Gross national product	0·9	1·9	0·4	−1·0	− 4	− 2	III/50
(*a*) By industrial origin:[5]							
Agriculture, forestry, fishing	0·2	5·0	3·5	+0·5	+ 17	+ 10	III/50
Other goods	1·0	4·5	0·8	−2·7	− 21	− 3	III/50
Mining, energy, manufacturing	0·9	4·4	0·9	−2·7	− 24	− 4	III/50
Construction	0·2	6·6	2·9	−0·1	− 8	− 8	I/51
Services	1·2	7·2	1·5	+1·7	+ 7	+ 2	III/59
(*b*) By type of income:							
Net wages	0·2	1·4	0·7	+0·7	+ 3	+ 2	I/59
Net profits[6]	0·6	6·2	2·5	−1·0	− 14	− 4	IV/50
distributed	0·6	8·4	3·4	+1·7	+ 19	+ 7	III/59
undistributed	0·5	17·3	9·7	−1·3	− 57	− 26	IV/50
Transfers from Government[7]	0·3	5·7	2·4	+0·2	+ 4	+ 7	III/51
Disposable income of Government[8]	0·5	5·8	2·7	+0·3	+ 8	+ 8	IV/50
Depreciation	0·2	5·2	2·2	+0·4	+ 7	+ 7	II/60
(*c*) By use:							
Private consumption	0·7	2·3	0·5	+1·9	+ 6	+ 2	I/59
Public consumption	0·3	5·1	2·6	+0·4	+ 13	+ 9	I/51
Gross fixed capital formation	0·2	1·9	1·5	+0·4	+ 7	+ 7	IV/50
Equipment[9]	0·1	1·7	1·5	−0·3	− 5	− 4	I/57
Construction[9]	0·2	3·5	2·6	+0·7	+ 13	+ 9	I/59
Change in stocks	0·5	57·2	39·4	+0·8	−400	−300	IV/59
Exports	0·3	3·5	2·1	−0·4	− 7	− 7	I/54
Imports (./.)	0·3	2·6	1·4	+1·5	+ 13	+ 13	III/57

[1] Quarterly accounts at current prices, seasonally unadjusted. Source: *Vierteljahrshefte zur Wirtschaftsforschung 1951–1963*, Duncker & Humblot, Berlin. [2] Differences between the first and the last *published* values. [3] Arithmetic average of the percentages for each quarter 1951–63, regardless of sign. [4] See footnotes 3 and 4 on Table II. [5] In contrast to 'b' and 'c' the breakdown of G.N.P. here excludes some special items such as net foreign income, G.N.P. Saarland, price adjustments for inventories. [6] Income of corporated and unincorporated business, rental income and interests, excluding profits and interests taken by the Government out of publicly-owned corporations, liquid assets and the like. [7] To the rest of the economy (excluding subsidies) and to aliens. [8] Taxes, social insurance contributions, Government profits (net) and other revenues (without equivalents for the 'selling' of public services) minus public transfers = Income for public consumption and for public net investment in fixed and liquid assets. [9] Since 1956, only twenty-six quarters.

TABLE IV

Revisions [1] [2] in level 1950–61: mean differences[3] of three critical quarters, starting a boom period and marking its end

	Start of boom[10]			End of boom[11]		
	Unadjusted[1]		Adjusted[4]	Unadjusted[1]		Adjusted[4]
	Regardless of sign					
	mrd. DM	% of the last value		mrd. DM	% of the last value	
Gross national product	1·1	3	1	1·6	3	—
(*a*) By industrial origin:[5]						
Agriculture, forestry, fishing	0·2	6	4	0·4	9	3
Other goods	1·2	8	1	1·4	6	1
Mining, energy, manufacturing	1·1	9	2	1·1	5	1
Construction	0·1	2	—	0·3	11	2
Services	0·8	7	2	2·8	15	1
(*b*) By type of income:						
Net wages	0·2	1	1	0·3	2	—
Net profits[6]	0·8	9	3	1·2	10	3
distributed	0·4	7	3	0·9	15	3
undistributed	0·4	14	7	0·4	12	8
Transfers from Government[7]	0·2	3	3	0·2	3	4
Disposable income of Government[8]	0·1	1	1	0·4	4	4
Depreciation	—	2	2	0·3	6	1
(*c*) By use:						
Private consumption	0·7	2	1	0·9	3	1
Public consumption	0·1	2	2	0·4	8	—
Gross fixed capital formation	0·2	3	2	0·1	2	1
Equipment[9]	—	—	—	0·1	1	1
Construction[9]	0·4	5	—	0·1	1	1
Change in stocks	0·6	130	78	0·4	26	20
Exports	0·2	2	2	0·7	7	2
Imports	0·1	1	1	0·5	5	1

[1–9] See Table III. [10] III/50, III/54, II/59. [11] III/51, III/56, III/61.

TABLE V

Revisions[1] in same-quarter-a-year-ago change,[2] 1951–61

Mean differences of forty-four quarters (unadjusted), regardless of sign

	mrd. DM	% of the last value	
		of level[3]	of change[4]
Gross national product	0·2	0·5	6
(*a*) By industrial origin:			
Agriculture, forestry, fishing	0·1	2·6	43
Other goods	0·2	0·6	7
Mining, energy, manufacturing	0·2	0·8	8
Construction	0·1	2·0	18
Services	0·2	1·3	16
(*b*) By type of income:			
Net wages	0·1	0·6	7
Net profits	0·3	3·4	61
distributed	0·2	3·0	48
undistributed	0·4	11·8	85
Transfers from Government	0·2	2·3	39
Disposable income of Government	0·2	2·5	39
Depreciation	0·1	2·0	21
(c) By use:			
Private consumption	0·1	0·5	6
Public consumption	0·2	3·1	33
Gross fixed capital formation	0·1	1·3	19
Equipment	0·1	1·3	19
Construction	0·1	1·9	16
Change in stocks	0·3	29·9	53
Exports	0·2	1·6	25
Imports	0·1	1·2	18

[1] See Table III. [2] Differences in change between the first- and the last-published values; lags in publication generally cover three quarters. [3] Differences in change related to the last estimate of level. [4] As in 4, but in relation to change.

TABLE VI

Revisions[1] [2] in level and in change 1950–61: direction[3] of revisions

	In level (forty-eight quarters)						In change (forty-four quarters)		
	Unadjusted			Adjusted[4]			Unadjusted		
	+	0	−	+	0	−	+	0	−
Gross national product	34	6	8	25	11	12	20	12	12
(*a*) By industrial origin:									
Agriculture, forestry, fishing	26	9	13	23	13	12	9	22	13
Other goods	33	1	14	24	5	19	18	13	13
Mining, energy, manufacturing	33	1	14	24	7	17	17	11	16
Construction	25	8	15	13	18	17	12	23	9
Services	28	4	16	21	9	18	22	9	13
(*b*) By type of income:									
Net wages	30	11	7	18	19	11	17	19	8
Net profits	19	4	25	21	6	21	18	5	21
distributed	30	5	13	21	10	17	17	4	23
undistributed	13	6	29	20	8	20	22	4	18
Transfers from Government	24	4	20	19	10	19	16	15	13
Disposable income of Government	29	4	15	19	8	21	18	9	17
Depreciation	29	12	7	21	19	8	19	18	7
(*c*) By use:									
Private consumption	23	9	16	22	13	13	17	16	11
Public consumption	27	7	14	12	16	20	16	14	14
Gross fixed capital formation	28	12	8	25	15	8	27	8	9
Equipment	10	5	11	10	7	9	12	9	5
Construction	19	5	2	15	6	5	14	9	3
Change in stocks	23	2	23	20	5	23	19	5	20
Exports	28	11	9	25	11	12	17	15	12
Imports	20	20	8	16	23	9	13	24	7

[1] [2] [4] See Table III. [3] Correction upwards = +; no correction = 0; correction downwards (first estimation too high) = −.