

CONTENTS

| | |
|----------------------|-----|
| PREFACE..... | VII |
| LIST OF TABLES | XIV |
| LIST OF FIGURES..... | XIX |
| ABBREVIATIONS | XX |

CHAPTER ONE

The Peculiar Severity of the German Economic Crisis: an Introduction

CHAPTER TWO

Labour Market Dynamics

| | |
|---|----|
| Unemployment in International Perspective | 8 |
| The Adult Labour Force Participation Rate | 14 |
| Wage Statistics 1924–1929 | 18 |
| A Model of Wage Dynamics | 20 |
| Wage Aspirations and Wage Bargaining Institutions | 24 |
| Testing the Influence of Arbitration | 36 |
| The Arbitrated Wage and the Labour Market | 38 |
| Wage Determination 1924–1928: A Synthesis | 42 |
| Wages 1930–1933..... | 43 |

CHAPTER THREE

Prices – Profits – Productivity

| | |
|---------------------------------------|----|
| Manufacturing Prices 1925–1929 | 49 |
| Prices and Costs | 54 |
| The Stagnation Thesis 1924–1929 | 61 |
| Stagnation 1913–1924 | 73 |
| Conclusion | 79 |

CHAPTER FOUR

German Exports and Competitivity

| | |
|--|-----|
| Exports and Comparative Advantage before 1914 | 82 |
| The Conditions of Export Decline and Revival 1913–1929 | 86 |
| German Export Competitivity 1913–1929 | 99 |
| German Exports 1929–1932 | 122 |
| Conclusion | 125 |

X CHAPTER FIVE

Monetary History and Analysis

| | |
|---|-----|
| Balance of Payments Relationships | 129 |
| Trade Credit and Foreign Borrowing 1924–1925 | 135 |
| Monetary Ease and Monetary Tension 1925–1927 | 146 |
| Wall Street and Reparations Crisis, 1928–1929 | 155 |
| Money Market Crisis: November 1929–July 1931 | 159 |
| Analysing the Deposit Withdrawals | 163 |
| Explaining the Deposit Withdrawals | 170 |
| Credit Rationing | 173 |
| The Aftermath of the Banking Crisis | 179 |
| Conclusion | 181 |



CHAPTER SIX

The Capital Market in the Aftermath
of Inflation

| | |
|--|-----|
| The Demand for Bonds | 184 |
| A Chronology of the Capital Market | 203 |

CHAPTER SEVEN

Fiscal Imbalances 1924–1928

| | |
|---|-----|
| The Fiscal System | 215 |
| Spending and Taxing 1924–1928 | 231 |
| Local Authority Borrowing | 250 |

CHAPTER EIGHT

The Fiscal Crisis 1929–1932

| | |
|---|-----|
| The Deteriorating Balance 1924–1928 | 266 |
| The Cash Crisis of 1929 | 271 |
| Taxing, Spending and Borrowing under Brüning | 287 |
| Brüning's Conception of Fiscal Policy | 296 |
| The Politics of Deflation | 302 |
| Deflation and the Money Markets before the Banking Crisis | 309 |
| Policy after the Banking Crisis | 317 |
| The Record of Deflation 1929–1932 | 326 |
| Conclusion | 329 |

CHAPTER NINE

Infrastructural Investment and Housebuilding

| | |
|--|-----|
| Infrastructural Investment | 332 |
| Investment in Public Buildings and Roads | 335 |
| Investment in the Railways and Post Office | 337 |
| Investment in Public Utilities | 344 |
| Housebuilding | 350 |
| Conclusion | 361 |

CHAPTER TEN

Business Investment

| | |
|---|-----|
| Fixed Investment: Realizations and Intentions | 364 |
| Capital Stock Utilization | 366 |
| Investment and the Cost of Finance | 372 |
| Fixed Investment and the Rise in Pessimism | 378 |
| The Rate of Inventory Investment | 385 |
| Explaining the Pattern of Inventory Investment..... | 393 |

CHAPTER ELEVEN

A Summary of the Argument

| | |
|---------------------------------|-----|
| A Summary of the Argument | 400 |
|---------------------------------|-----|

APPENDIX ONE

| | |
|---|-----|
| Comparable Unemployment Rates for Germany and the U.K..... | 415 |
|---|-----|

APPENDIX TWO

| | |
|---|-----|
| Comparable German and U.S. Unemployment Rates | 430 |
|---|-----|

APPENDIX THREE

| | |
|---|-----|
| An Index of Hourly Labour Productivity in the Industrial Tradeables Sector | 436 |
|---|-----|

APPENDIX FOUR

| | |
|--|-----|
| Indexes of Output and Domestic Consumption of Machinery | 444 |
|--|-----|

APPENDIX FIVE

| | |
|-----------------------|-----|
| Bank Statistics | 450 |
|-----------------------|-----|

APPENDIX SIX

| | |
|------------------------------------|-----|
| Statistics of Capital Issues | 454 |
|------------------------------------|-----|

APPENDIX SEVEN

| | |
|---|-----|
| Estimating the End-of-quarter Cash Balance of the Reich | 457 |
|---|-----|

APPENDIX EIGHT

| | |
|---|-----|
| Estimating the Rate of Utilization of the Industrial Fixed Capital Stock 1924 – 1932 | 463 |
|---|-----|

APPENDIX NINE

| | |
|---|-----|
| The Deflation of Inventory Investment | 470 |
|---|-----|

| | |
|--------------------|-----|
| BIBLIOGRAPHY | 475 |
| INDEX | 498 |

LIST OF TABLES

| | |
|--|----|
| TABLE 1.1: Unemployment in Germany 1924–1932 | 2 |
| TABLE 1.2: Industry-specific rates of unemployment in June 1933 in Germany and the United Kingdom | 3 |
| TABLE 1.3: Index of production deseasonalized 1925–1933 | 5 |
| TABLE 2.1: Comparable unemployment rates in Germany and the U.K. 1925–1933 | 9 |
| TABLE 2.2: Labour force and population in work as percentage of population aged 14–64 | 11 |
| TABLE 2.3: Estimates of the annual average rate of unemployment of non- farm wage and salary earners in Germany and the United States | 13 |
| TABLE 2.4: Collectively contracted wage rates and actual earnings, 1913, 1924–1932: annual averages, nominal and real | 16 |
| TABLE 2.5: Excess of actual wages over collectively contracted wage rates | 19 |
| TABLE 2.6: Conciliation and arbitration statistics | 32 |
| TABLE 2.7: Mode of conclusion of collective wage contracts | 34 |
| TABLE 2.8: Strikes and lockouts | 39 |
| TABLE 2.9: Wage rates in Germany and Britain 1930–1933 | 45 |
| TABLE 3.1: Wholesale prices and export unit values of German finished goods, 1913, 1925–1929 | 51 |
| TABLE 3.2: Prices, productivity and variable costs of industrial tradeables | 55 |
| TABLE 3.3: Profit and loss rates of quoted or larger joint-stock companies in mining and manufacturing | 60 |
| TABLE 3.4: Output per man-hour in manufacturing: Germany and the U.S.A. | 62 |
| TABLE 3.5: Coal output per man-shift in selected countries | 63 |
| TABLE 3.6: Percentage of coal mechanically cut | 63 |
| TABLE 3.7: Average output per blast furnace in blast | 64 |
| TABLE 3.8: Iron and steel works and rolling mills: hourly labour productivity in Germany and the U.S.A. | 64 |
| TABLE 3.9: Hourly labour productivity in vehicle manufacture | 65 |
| TABLE 3.10: World rayon output | 65 |
| TABLE 3.11: Cotton spindleage in the main producing countries | 66 |
| TABLE 3.12: Hourly labour productivity in pulp and paper manufacture | 67 |
| TABLE 3.13: Indexes of fixed investment activity 1913, 1920–1929 | 74 |
| TABLE 3.14: Imports of metal-working machinery | 76 |
| TABLE 4.1: Distribution of the manufactured exports of various countries in 1929 by class of good | 83 |
| TABLE 4.2: Growth or contraction ratios for the merchandise exports of European countries 1913, 1925, 1929 | 87 |

| | |
|---|-----|
| TABLE 4.3: Explaining the German export decline 1913–1922 | 90 |
| TABLE 4.4: Explaining the German export recovery 1924–1928 | 94 |
| TABLE 4.5: A matrix of rank-order correlation coefficients for imports from Germany, U.K., U.S.A., and France | 96 |
| TABLE 4.6: German exports 1923–1925 at 1913 unit values | 98 |
| TABLE 4.7: Comparison between the export unit values of finished goods from Germany and other continental countries 1923–1930 | 100 |
| TABLE 4.8: Comparison of German and U.S. exports of manufactures, at current prices, to the U.K. and Ireland 1913 (1913/14), 1929 | 101 |
| TABLE 4.9: Comparison of German and U.S. exports of manufactures to Argentina 1913 (1913/14), 1929, at current values | 108 |
| TABLE 4.10: Comparison of German and U.S. exports of manufactures to Scandinavia 1913 (1913/14), 1929, at current values | 109 |
| TABLE 4.11: Machinery exports of leading producers | 111 |
| TABLE 4.12: Machinery prices and export unit values: Germany and Britain | 112 |
| TABLE 4.13: World exports of electro-technical products 1913–1929 | 119 |
| TABLE 4.14: The monthly export of manufactures from Germany (deseasonalized) 1925–1933 | 123 |
| TABLE 4.15: German and British exports of finished goods 1929–1932 (current prices) | 124 |
| TABLE 5.1: The German balance of payments 1924–1931 | 133 |
| TABLE 5.2: The deseasonalized monthly balance of trade 1923–1930 | 137 |
| TABLE 5.3: Reichsbank bill holdings (deseasonalized) | 139 |
| TABLE 5.4: Reichsbank holdings of gold and foreign exchange (deseasonalized) | 139 |
| TABLE 5.5: The market rate of discount on prime bills | 142 |
| TABLE 5.6: The cost of foreign-currency borrowing | 143 |
| TABLE 5.7: Estimated short-term indebtedness of the German economy to abroad | 144 |
| TABLE 5.8: The differential between the market discount rate on prime bills in Berlin and New York | 147 |
| TABLE 5.9: Changes in Reichsbank discount rate | 148 |
| TABLE 5.10: The deseasonalized ratio between Reichsbank discount rate and the market rate of discount on bank acceptances | 148 |
| TABLE 5.11: The reichsmark-dollar exchange rate (New York quotations) | 149 |
| TABLE 5.12: Measures of the liquidity of the great banks | 152 |
| TABLE 5.13: Measures of the liquidity status of credit and mortgage banks other than great banks | 153 |
| TABLE 5.14: Deposits and advances of the great banks October 1929–July 1930 | 161 |
| TABLE 5.15: Proportionate reductions of "other deposits" at the Berlin great banks severally, and at other credit and mortgage banks in aggregate during crisis periods | 165 |

| | |
|--|-----|
| TABLE 5.16: Great banks' foreign currency assets and liabilities | 167 |
| TABLE 5.17: Percentage reduction of liquid assets by type in various crises | 168 |
| TABLE 5.18: Reichsbank discount rate and market discount rate 1931-1932 | 181 |
| TABLE 6.1: Annual average prices and current yields of gold mortgage-bonds bearing different coupon rates | 186 |
| TABLE 6.2: Distribution of gold mortgage-bond stock by coupon-rate type 1925-1932 | 187 |
| TABLE 6.3: Prices of bonds of the German Reich 1887-1913 | 188 |
| TABLE 6.4: The relationship between bond yield and market discount rate 1887-1930 | 189 |
| TABLE 6.5: The stocks of German securities 1903-1930 | 193 |
| TABLE 6.6: Earnings: price ratios on equity and bonds 1900-1929 | 197 |
| TABLE 6.7: Maturity distribution of deposits at Berlin great banks, 1913, 1924-1929 | 198 |
| TABLE 6.8: Current yields on German foreign bonds and on U.S. domestic bonds 1925-1928 | 202 |
| TABLE 6.9: Bond flotations on the German market 1924-1932 | 203 |
| TABLE 6.10: New equity issues on the German market 1924-1932 | 204 |
| TABLE 6.11: German bond issues on foreign capital markets 1925-1932 . | 205 |
| TABLE 6.12: German foreign bond issues as % of total U.S. bond issues . | 205 |
| TABLE 6.13: Quarterly average price of 8 % gold mortgage-bonds | 206 |
| TABLE 6.14: The German share price index | 207 |
| TABLE 6.15: German foreign bond prices and U.S. bond prices 1927-1931 (Jan.-July 1927 = 100) | 210 |
| TABLE 6.16: Index of German stock market turnover | 211 |
| TABLE 7.1: Consolidated fiscal balance 1925/26-1932/33 | 217 |
| TABLE 7.2: Fiscal balance by branch of government | 226 |
| TABLE 7.3: Analysis of sources of fiscal disequilibrium | 230 |
| TABLE 7.4: Local authority current expenditure | 235 |
| TABLE 7.5: Local authority expenditure in Germany on new construction and property purchase | 236 |
| TABLE 7.6: Loan expenditure/capital expenditure of local authorities in England and Wales | 237 |
| TABLE 7.7: Government expenditure by type | 239 |
| TABLE 7.8: Reich and local authority expenditure on "crisis relief" and welfare relief of the unemployed | 243 |
| TABLE 7.9: Analysis of tax revenues 1925/26 and 1928/29 | 245 |
| TABLE 7.10: Analysis of local authority and state borrowing in Germany and local authority borrowing in England and Wales 1924/25-1929/30 . | 251 |
| TABLE 7.11: Post-stabilization debts of the larger local authorities | 255 |
| TABLE 7.12: Analysis of the debt of all local authorities | 256 |
| TABLE 7.13: Net sums appropriated by local authorities for budgetary purposes from surpluses of public undertakings | 265 |

| | | |
|-------------|--|-----|
| TABLE 8.1: | Financing the Reich's cash balance 1924/25–1932/33 | 268 |
| TABLE 8.2: | Monthly tax revenues of the Reich, deseasonalized 1927–1931 | 271 |
| TABLE 8.3: | Analysis of tax revenues 1929/30, 1930/31, 1932/33 | 274 |
| TABLE 9.1: | Gross investment in Germany 1925–1933 | 333 |
| TABLE 9.2: | Gross investment in the United Kingdom 1924–1933 | 333 |
| TABLE 9.3: | Gross fixed investment in Germany 1924–1933 | 334 |
| TABLE 9.4: | Gross fixed investment in the U.K. 1927–1932 | 335 |
| TABLE 9.5: | Distribution of net fixed public investment (excl. public undertakings) by level of government 1925–1927 | 336 |
| TABLE 9.6: | Public buildings: permits and completions 1927–1929 | 336 |
| TABLE 9.7: | German Railway Co. Operating surpluses and their use | 338 |
| TABLE 9.8: | Locomotive stock of the German Railway Co. and its predecessors. Gross changes and new orders. Nos. of locomotives | 339 |
| TABLE 9.9: | Age distribution of locomotive stock of the German Railway Co. and its predecessors 1913 and 1927 | 339 |
| TABLE 9.10: | Gross investment in communications 1925–1933 | 341 |
| TABLE 9.11: | Gross investment by the railway industry 1926–1930 | 342 |
| TABLE 9.12: | Installed capacity, output, and utilization rates in the public electricity supply 1900–1931 | 346 |
| TABLE 9.13: | Issue of fixed interest (long-term) securities by branch of industry/commerce, 1.1.1924 to 31.12.1928/29 | 347 |
| TABLE 9.14: | Average nominal rates of interest at 31.12.1929 on outstanding long-term debt issued since 1.1.1925 | 348 |
| TABLE 9.15: | Distribution of generating capacity by size of plant: public electricity supply | 350 |
| TABLE 9.16: | Housebuilding in Germany 1913–1930 | 351 |
| TABLE 9.17: | The financing of investment in housebuilding | 354 |
| TABLE 9.18: | The financing of housebuilding 1924–1932 | 355 |
| TABLE 9.19: | Estimates of annual housebuilding 1925–1932 | 356 |
| TABLE 9.20: | Quarterly urban housebuilding statistics 1925–1929 | 359 |
| TABLE 9.21: | Gross fixed investment 1930–1932 as proportion of average gross fixed investment in the same sector 1927–1929: Germany and the U.K. | 362 |
| TABLE 10.1: | New domestic machinery orders 1925–1930 | 365 |
| TABLE 10.2: | Permits and net additions: private urban non-residential buildings | 366 |
| TABLE 10.3: | Employment capacity index: Actual as % of maximum possible employment in July–December 1928; by industry | 367 |
| TABLE 10.4: | Machine-building: employment capacity index | 370 |
| TABLE 10.5: | Cotton: utilization of the capital stock | 371 |
| TABLE 10.6: | Estimates of capital stock utilization in industry and commerce | 373 |
| TABLE 10.7: | Gross investment in industry and mining by branch 1927–1929 | 377 |
| TABLE 10.8: | Selected annual real output statistics 1927–1929 | 378 |

| | |
|---|-----|
| TABLE 10.9: Ratio of share prices to gold mortgage-bond prices July–December | 381 |
| TABLE 10.10: Investment in stocks at current and constant prices | 388 |
| TABLE 10.11: The German import surplus 1923–1933 | 390 |
| TABLE 10.12: World cotton mill stocks of raw cotton, July 1924–January 1930 | 396 |
| TABLE 10.13: American cotton: crop, supply, price | 397 |
| TABLE 10.14: U.S. inventories at the end of the year as % of the same at the end of the previous year 1926–1930 | 398 |
| TABLE 11.1: Agricultural debt statistics | 411 |
| TABLE 11.2: Bankruptcy sales of agricultural and forestry estates in most of Germany | 411 |
| TABLE 1A: Comparison of registered and census unemployment in Germany on 16th June 1933 | 419 |
| TABLE 1B: The German labour force in industry, trade and commerce in June 1933, according to the Occupational Census | 421 |
| TABLE 1C: Dependent employment in German industry, trade and commerce according to the Occupational Censuses of 1925 and 1933 | 423 |
| TABLE 1D: Estimating the German population in work in sectors covered in Britain by Unemployment Insurance | 425 |
| TABLE 1E: Employers, self-employed, and unpaid family workers in the sectors covered in the U.K. by Unemployment Insurance | 427 |
| TABLE 1F: Calculation of a German rate of unemployment comparable to the U.K. rate of unemployment in the insured labour force | 428 |
| TABLE 1G: Estimates of employment and unemployment in Germany, all sectors | 429 |
| TABLE 2A: The age structure of the German population 1925–1933 | 433 |
| TABLE 2B: Calculation of comparable U.S. and German unemployment rates | 434 |
| TABLE 3A: Estimates of hours worked and indexes of labour productivity in various industries 1913, 1925–1929 | 438 |
| TABLE 3B: Modelling Hoffmann's calculation of real output of metal manufactures 1925–1929 | 440 |
| TABLE 3C: An expression for value added per employee at current prices | 442 |
| TABLE 3D: Values for the variables of the equation in Table 3C | 442 |
| TABLE 3E: Value added per worker at current prices, and a price index for metal manufactures | 443 |
| TABLE 4A: Real output and domestic purchases of machinery 1913, 1919–1929 | 445 |
| TABLE 5A: Selected assets and liabilities from aggregated great banks' interim balance sheets | 450 |
| TABLE 5B: Selected aggregated assets and liabilities of credit and mortgage banks other than great banks 1929–1931 | 453 |
| TABLE 6A: Quarterly domestic bond issues in Germany 1925–1933 | 454 |

| | | |
|-----------|---|-----|
| TABLE 6B: | German bonds issued abroad 1925–1930 | 455 |
| TABLE 6C: | Total U.S. bond issues, quarterly 1923–1931 | 456 |
| TABLE 7A: | Estimating the End-of-quarter Cash Balance of the Reich . . | 457 |
| TABLE 8A: | R. Kregel's estimates of capital-stock utilization in mining and manufacturing | 464 |
| TABLE 8B: | A.F. Mester's estimates of capital-stock utilisation in the entire economy | 464 |
| TABLE 8C: | Fixed capital stock 1924–1938 | 466 |
| TABLE 8D: | The "employment capacity index": all industries | 467 |
| TABLE 8E: | Employment | 468 |
| TABLE 8F: | The capital : output ratio for "business", 1925–1930, 1936–1938 | 469 |
| TABLE 8G: | The capital : labour ratio for "business", 1924–1930, 1936–1938 | 469 |
| TABLE 9A: | Classification of Price Indexes | 470 |
| TABLE 9B: | Deflation of the 1929–1933 data | 472 |

LIST OF FIGURES

| | | |
|-------------|---|----|
| FIGURE 2.1: | A model of wage determination in Germany 1924–1929 | 21 |
| FIGURE 2.2: | The cyclical sensitivities of "tariff-wage" rate change | 28 |