Contents

List	of tables	vii
Pref	ace	xxiii
1	Introduction: Why eastern European productivity comparisons are of interest	1
Part	I The Czech Republic	13
2	Czech Republic background country study	15
3	The labour market and educational system in the Czech Republic	55
4	The engineering industry in the Czech Republic	79
5	The food processing industry in the Czech Republic	95
6	The textile and clothing industries in the Czech Republic	107
7	The furniture industry in the Czech Republic	123
Part	II Hungary	131
8	Hungary background country study	133
9	The educational system in Hungary	173
10	The engineering industry in Hungary	189

11	The food processing industry in Hungary	213
12	The textile and clothing industries in Hungary	220
13	The furniture and shoe industries in Hungary	229
Par	-	259
	t III The matched plant results and conclusions	281
14	Czech Republic and Hungarian results of matched plant comparisons	
1.5	The control of the co	283
15	The Czech Republic and Hungary in comparison with Northern Ireland	
16	C	321
10	Comparative competitiveness in Czech Republic and Hungarian manufacturing firms: Conclusions	
D:Li:		333
DIDN	ography	351

List of tables

1.1	European GDP per capita, 1870-1987	4
1.2	Comparative eastern European economic indicators	8
1.3	Comparative progress in eastern Europe towards a market economy, 1994	Ģ
2.1	Selected macro economic indicators, Czech Republic, 1990-94	17
2.2	Composition of Czech Republic GDP, 1990-94	18
2.3	Sectoral structure of the working population, Czech Republic, 1989-93	19
2.4	Property approved for privatisation and transferred to the National Property Fund, 31 December 1993	20
2.5	Privatisation projects for privatised enterprises, 31 December 1993	22
2.6	Share of the non-state enterprises in GDP, 1989-94	23
2.7	Czech Republic selected indicators by industry, 1992	25
2.8	Output, employment and exports in selected industrial branches, Czech Republic, 1992	26

2.9	Size distribution of manufacturing firms, Czech Republic, 1989-93	27
2.10	Size distribution of industrial enterprises, Czech Republic, 1992	29
2.11	Small enterprises in Czech manufacturing	31
2.12	Czechoslovakian output per employee in matched enterprises, 1989	32
2.13	Labour productivity and average salary by sector, Czech Republic, 1992	33
2.14	Regional structure of industry, Czech Republic, 1992	35
2.15	Ownership structure of the industrial enterprises, Czech Republic, 1992	36
2.16	Ownership structure of enterprises by region, Czech Republic, 1992	37
2.17	Profit by industrial sector, Czech Republic, 1992	39
2.18	Number of licensed commercial banks, Czech Republic, 1990-93	42
2.19	(a) Geographical structure of the Czech Republic's external trade, 1989-94; Share of exports	44
2.19	(b) Geographical structure of the Czech Republic's external trade, 1989-94; Share of imports	45
2.20	Commodity structure of external trade, 1992-94	46
2.21	Foreign direct investment in the Czech Republic,	
2.22	Geographical source of foreign direct investment, Czech Republic, 1990-94	47
		48

2.23	Sectoral structure of foreign investment, Czech Republic, 1990-94	49
3.1	Population and workforce statistics, Czech Republic, 1989 and 1992	56
3.2	Employment by ownership type, Czech Republic, 1989 and 1992	56
3.3	Sectoral structure of employment, Czech Republic, 1989 and 1992	58
3.4	Employment by industry, Czech Republic, 1989 and 1992	58
3.5	Unemployment by region, Czech Republic, 1991 and 1992	60
3.6	Average monthly wages and salaries in the national economy	62
3.7	Average wages by industry, Czech Republic, 1989 and 1992	63
3.8	GDP per employee, Czech Republic, 1989 and 1992	65
3.9	Number of students in SVTCs by branch, Czech Republic, 1989 and 1993	71
3.10	Universities: School, faculty, student and graduate numbers, Czech Republic, 1990	72
3.11	Composition of full-time college students, Czech Republic, 1990/91	73
3.12	Students by secondary schools and universities, Czech Republic, 1989 and 1992	74
3.13	Number of secondary schools, Czech Republic	74
3.14	Number of university students per 10,000 inhabitants	75
4 .1	Value of engineering exports, Czechoslovakia, 1937	80

4.2	Value and volume of Czechoslovakian engineering exports, 1937-47	81
4.3	Size structure development, engineering enterprises, Czech Republic, 1989 and 1992	85
4.4	Importance of the engineering industry, Czech Republic, 1989 and 1992	86
4.5	Main characteristics of the engineering industry, Czech Republic, 1989 and 1992	87
4.6	Regional structure of the engineering industry, Czech Republic, 1992	88
4.7	Performance of the engineering industry, Czech Republic, 1992	90
4.8	Development of annual savings, Czech Republic	93
5.1	Relative importance of the food processing industry, Czech Republic, 1989 and 1992	95
5.2	Main characteristics of the food processing industry, Czech Republic, 1989 and 1992	97
5.3	Regional structure of the food processing industry, Czech Republic, 1992	98
5.4	Size structure of food processing enterprises, Czech Republic, 1989 and 1992	99
5.5	Trading data, Nestle-Cokoladovny	101
5.6	Sales and profit, Nestle-Cokoladovny	103
6.1	Importance of textiles, Czech Republic, 1989 and 1992	108
6.2	Importance of clothing, Czech Republic, 1989 and 1992	109

6.3	Main characteristics of the textile industry, Czech Republic, 1989 and 1992	110
6.4	Main characteristics of the clothing industry, Czech Republic, 1989 and 1992	111
6.5	Regional structure of the textile and clothing industries, Czech Republic, 1992	115
6.6	Size structure of textile industry enterprises, Czech Republic, 1989-92	116
6.7	Size structure of clothing industry enterprises, Czech Republic, 1989-92	117
6.8	Share of largest four producers in the textile and clothing industries, Czech Republic, 1989 and 1992	117
6.9	Production costs in textiles, Czech Republic: International comparisons, 1989	119
7.1	Importance of the furniture industry, Czech Republic, 1989 and 1992	124
7.2	Main characteristics of the furniture industry, Czech Republic, 1989 and 1992	125
7.3	Size structure of furniture industry enterprises, Czech Republic, 1989 and 1992	126
7.4	Regional structure of the furniture industry, Czech Republic, 1992	126
8.1	International comparisons of capital equipment output, 1907-10	134
8.2	International comparisons of external debt per capita, 1989	136
8.3	Hungarian banking, 1848-1913	137

8.4	Growth of GNP and sectoral output, Hungary, 1867-1913	137
8.5	Sectoral composition of the economy, Hungary, 1869-1910	138
8.6	Composition of foreign trade, Hungary, 1867-1913	138
8.7	Industrial structure, Hungary, 1898-1913	139
8.8	Hungarian banking, 1925-38	140
8.9	Sectoral composition of GNP, Hungary, 1924-34	140
8.10	Sectoral composition of employment, Hungary, 1910-30	140
8.11	Composition of foreign trade, Hungary, 1925-38	141
8.12	Growth of industrial branches, Hungary, 1913-43	141
8.13	Industrial structure, Hungary, 1929-38	142
8.14	Allocation of capital equipment by industry, Hungary, 1929 and 1938	143
8.15	Industrial structure, Hungary, 1938-65	144
8.16	Sectoral composition of GNP, Hungary, 1959 and 1968	144
8.17	Sectoral composition of employment, Hungary, 1949 and 1969	145
8.18	Composition of foreign trade, Hungary, 1950 and 1968	145
8.19	Growth of industrial branches, Hungary, 1950-68	146
8.20	Main economic indicators, Hungary, 1970-80	147

8.21	Main economic indicators, Hungary, 1981-90	148
8.22	Key economic indicators, Hungary, 1988-93	159
8.23	Main indicators of foreign indebtedness, Hungary, 1987-93	160
8.24	Structure of GDP, Hungary, 1990-92	160
8.25	Number of Hungarian corporate institutions by control and ownership type, 1988-93	161
8.26	Number of Hungarian economic organisations and legal entity by industrial branch, 1990 and 1994	161
8.27	Company size structure, Hungary, 1989-94	162
8.28	Company bankruptcy, Hungary, 1992-94	162
8.29	Privatisation, Hungary, 1990-93	163
8.30	Distribution of income raised by SPA by selling Hungarian state companies, 1992 and 1993	163
8.31	Levels of employment, Hungary, 1980-93	164
8.32	Prices and wages, Hungary, 1988-92	164
8.33	Industrial price indices, Hungary, 1988-93	165
8.34	Changes in volume of industrial output and structure, Hungary, 1988-92	165
8.35	Industrial sectoral trends, Hungary, 1990-92	166
8.36	Hungarian exports and imports, value and share to GDP, international comparisons, 1981-91	167
8.37	Net inflows of FDI to Hungary and FDI share of gross domestic investment (GDI), international comparisons, 1991	168

8.38	Hungarian debt servicing, international comparisons, 1991	169
9.1	Educational attainment, international comparisons	176
9.2	Public expenditure on education, Hungary, 1980-91	178
9.3	Secondary education by school type, Hungary, 1982-91	181
9.4	Public expenditure by type of school, Hungary, 1985-91	183
9.5	Level and allocation of Hungarian public expenditure on education	184
9.6	Training skills, Hungary, 1991-92	184
9.7	Unemployment by educational attainment, Hungary, 1988 and 1990	186
9.8	Development of the Hungarian "Re-education" system, 1984-90	187
10.1	Engineering industry, Hungary, 1938-68	190
10.2	Market structure of the engineering industry, Hungary, 1960 and 1970	191
10.3	Market structure of Hungarian engineering industry since 1970	192
10.4	Branch structure of the engineering industry, Hungary, 1980 and 1989	194
10.5	Output, employment, productivity and average earnings, Hungary, 1989-92	195
10.6	Engineering, changes in Rouble exports, Hungary, 1986-90	-7-5
10.7	Cumulative effects of the Rouble export changes, Hungary, 1986-90	196 197

10.8	Structural changes in the engineering industry, Hungary, 1989-92	198
10.9	Recent trends in engineering by branch, Hungary, 1992	199
10.10	Export reorientation by branches of the Hungarian engineering industry	200
10.11	The effects of changing statistical definitions, Hungary, 1992	201
10.12	Corporate structure in the engineering industry by company size, Hungary, 1988 and 1991	208
10.13	Role of FDI in the changing corporate structure, engineering industry, Hungary, 1991	209
10.14	Role of JVs in the corporate structure, engineering industry, end 1991	209
10.15	Size distribution of all industrial companies, Hungary, end 1991	210
10.16	Role of the JVs in the growth of foreign trade by country and commodity groups, Hungary, 1992	211
11.1	Employment, food processing industry, Hungary, 1980-92	215
11.2	Gross output, food processing industry, Hungary, 1980-93	215
11.3	Number of firms, food processing industry, Hungary, 1985-90	217
11.4	Composition of exports, food processing sector, Hungary, 1981-92	220
11.5	Food processing sector export subsidy, Hungary, 1981-93	221

11.6	Number of firms, food processing industry, Hungary, 1990-92	225
11.7	Average firm size, food processing industry, Hungary, 1990-92	225
11.8	Annual investments, food processing industry, Hungary, 1989-92	227
12.1	Textile and clothing industries, Hungary, 1950-70	231
12.2	Textile and clothing industries, Hungary, 1938-80	233
12.3	Textile industry, Hungary, 1960 and 1980	234
12.4	Textile and clothing industries output of selected items, Hungary, 1938-80	234
12.5	Use of modern technology in spinning and weaving sectors, Hungary, 1960-80	235
12.6	Man-made fibre consumption, textile industry, Hungary, 1970-88	236
12.7	Company and plant structure, textile and clothing industries, Hungary, 1988	242
12.8	Role of industrial co-operatives, textile and clothing industries, Hungary, 1988	242
12.9	Textile and clothing industries, Hungary, 1980 and 1988	243
12.10	International sub-contracting activities, textile and clothing industries, 1988	244
12.11	Trends in output and in the number of manual employees in the Hungarian textile and clothing industries, 1960-88	244
12.12	Productivity growth, textile and clothing industries, Hungary, 1980-88	245

12.13	Market structure, textile and clothing industries, Hungary, 1988	246
12.14	Structural changes in the textile industry, Hungary, 1980-89	246
12.15	Company and plant structure, textile and clothing industries, Hungary, 1988	248
12.16	Size structure, textile and clothing industries, Hungary, 1988	248
12.17	Size structure, textile and clothing industries, Hungary, 1991	249
12.18	Number and size structure of joint ventures, textile and clothing industries, Hungary, 1991	251
12.19	Growth of output, exports and employment, textile and clothing industries, Hungary, 1988-92	252
12.20	Companies under bankruptcy proceedings, textile and clothing industries, Hungary, 1993	253
12.21	Main characteristics of the ten largest state companies in the Hungarian clothing industry, 1978	254
12.22	Main characteristics of the nine largest clothing companies, Hungary, 1991	255
12.23	Performance differences between large and small clothing companies, Hungary, 1991	256
12.24	Performance differences between large and small joint ventures in the Hungarian clothing industry, 1991	257
13.1	Main characteristics of the furniture industry, 1970-86	262
13.2	Technical development of the furniture industry, Hungary, 1970-86	263

13.3	Corporate structure, furniture industry, Hungary, 1991	267
13.4	Size structure, furniture industry, Hungary	268
13.5	Furniture industry production, Hungary, 1991	269
13.6	Sales indices, furniture industry, Hungary, 1990-93	270
13.7	Price indices, furniture industry, Hungary, 1990 and 1991	270
13.8	Principal products, furniture industry, Hungary, 1980-93	271
13.9	Employment and capital data, furniture and total manufacturing industries, Hungary, 1991	271
13.10	Output, employment and productivity, furniture industry, Hungary, 1985-92	272
13.11	Shoe industry, Hungary, 1938-49	273
13.12	Production and exports, shoe industry, Hungary, 1950-77	274
13.13	Ownership structure, shoe industry, Hungary, 1950-77	274
13.14	Corporate structure, shoe industry, Hungary, 1991	275
13.15	Size structure, shoe industry, Hungary, 1991	276
13.16	Production and sales, shoe industry, Hungary, 1980-93	276
13.17	Hungarian shoe industry production and sales, 1990 and 1991	277
13.18	Price indices, shoe industry, Hungary, 1990 and 1991	278
	Employment and capital data, shoe industry, Hungary, 1991	278
13.20	Output, employment and productivity, shoe industry, Hungary, 1985-91	279

14.1	Employment by sector, Czech Republic, east Germany and Hungary, 1989 and 1992	286
14.2	Number of plants visited by sector	287
14.3	(a) Distribution of plants by sector and location, Czech Republic	289
14.3	(b) Distribution of plants by sector and location, Hungary	290
14.4	Size distribution of plants compared between samples	291
14.5	Sample comparative productivity by sector	293
14.6	Wage comparisons, monthly	294
14.7	Distribution of plants according to comparative productivity achieved, Czech Republic and Hungary	296
14.8	(a) Relative importance of factors in establishing physical productivity gains by sector, Czech Republic	297
14.8	(b) Sources of expected productivity gains by sector, Hungary	298
14.9	Investment priorities in the Czech, east German and Hungarian samples	299
14.10	Productivity change in the Czech and Hungarian sample plants in real terms, 1989 and 1992	300
14.11	Output and employment change, Czech Republic and Hungary, 1989-92	301
14.12	Market breakdown of sales, Czech Republic and Hungary, 1989 and 1992	303
14.13	Market breakdown of sales, Czech Republic (1992), east Germany (post-unification) and Hungary (1992)	304

14.14	Capacity utilisation in the sample countries by sector	305
14.15	Shiftworking at Czech and east German plants	305
14.16	Shop-floor employment, composition of the firms sampled, Czech Republic and Hungary, 1992	306
14.17	Reduction in shop-floor employment, Czech Republic and Hungary	307
14.18	Employment change in the sample plants, Czech Republic and Hungary	308
14.19	Sample comparisons of shop-floor employment by sector	309
14.20	Sample comparisons of shop-floor employment composition by sector, Czech Republic, east Germany, Hungary and west Germany	310
14.21	Maintenance workers	311
14.22	Sample comparisons of R&D employment by sector, Czech Republic, Hungary and west Germany	311
14.23	Skilled persons on the shop-floor	313
14.24	Higher level qualifications	313
14.25	Sectoral variations in higher qualifications, Hungary, Czech Republic (1992) and east Germany (post-unification)	314
14.26	Rates of absenteeism	315
14.27	Comparative age of machinery	316
14.28	Proportion of western made machinery, Czech Republic and Hungary	317
14.29	Level of technology in the Czech Republic, east Germany and Hungary	317

14.30	market conditions in the Czech Republic (1995) and in east Germany (1991)	318
15.1	Comparative manufacturing productivity in Northern Ireland relative to west Germany, 1991	322
15.2	Number of plants visited by sector	323
15.3	Size distribution of sample plants, CR, H, EG, NI and WG	324
15.4	Comparative manufacturing productivity, 1993	324
15.5	Importance of differences in product quality, NI/WG, 1988	325
15.6	Partitioning of the productivity gap with west Germany	326
15.7	Sample comparisons of R&D employment by sector, Czech Republic, Hungary, NI and west Germany	327
15.8	Sources of expected productivity gains by country	327
15.9	Comparative age of machinery, CR, H, EG, NI and WG	328
15.10	Proportion of companies achieving west German technology standards, Czech Republic, Hungary, east Germany and NI	328
15.11	Formally skilled persons on the shop-floor, CR, H, EG, NI and WG	329
15.12	Higher level qualifications, CR, H, EG, NI and WG	329
15.13	Comparisons of shop-floor employment by sector, CR, H, EG, NI and WG	330
15.14	Reported overmanning at plants in NI	330
15.15	Sample comparisons of employment by sector, CR, H, EG, NI and WG	331

16.1	Likely survival rates of plants sampled, Czech Republic, east Germany and Hungary	336
16.2	Productivity and living standards shortfall, Czech Republic and Hungary, early 1990s	341