

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

CONTEMPORARY CHINA INSTITUTE PUBLICATIONS

Editorial Board

Robert F. Ash Stuart R. Schram

David Steeds Kenneth R. Walker

M. Yahuda

The Contemporary China Institute
School of Oriental and African Studies, University of London,
sponsors research on Twentieth-Century China and
seeks to promote such studies in the U.K.

ECONOMIC DEVELOPMENT IN PROVINCIAL
CHINA

THE CENTRAL SHAANXI SINCE 1930

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

Publications in the series include:

Mao Tse-tung in the Scales of History (1977) *edited by Dick Wilson*

Shanghai: Revolution and Development in an Asian Metropolis (1980) *edited by Christopher Howe*

Mao Zedong and the Political Economy of the Border Region. A Translation of Mao's *Economic and Financial Problems* (1980) *edited and translated by Andrew Watson*

The Politics of Marriage in Contemporary China (1981) *by Elisabeth Croll*

Food Grain Procurement and Consumption in China (1984) *by Kenneth R. Walker*

Class and Social Stratification in Post-Revolution China (1984) *edited by James L. Watson*

Warlord Soldiers. Chinese Common Soldiers, 1911–1937 (1985) *by Diana Lary*

Centre and Province in the People's Republic of China. Sichuan and Guizhou, 1955–1965 (1986) *by David S. G. Goodman*

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

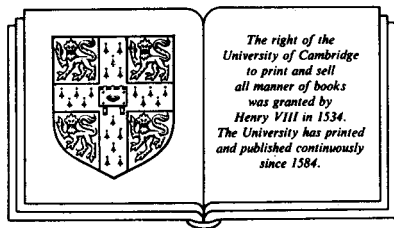
[More information](#)

ECONOMIC DEVELOPMENT IN PROVINCIAL CHINA

THE CENTRAL SHAANXI SINCE 1930

EDUARD B. VERMEER

Sinologisch Instituut, Leiden



CAMBRIDGE UNIVERSITY PRESS

Cambridge

New York New Rochelle

Melbourne Sydney

Cambridge University Press
 978-0-521-11543-8 - Economic Development in Provincial China: The Central
 Shaanxi since 1930
 Eduard B. Vermeer
 Frontmatter
[More information](#)

CAMBRIDGE UNIVERSITY PRESS
 Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi

Cambridge University Press
 The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org
 Information on this title: www.cambridge.org/9780521115438

© Cambridge University Press 1988

This publication is in copyright. Subject to statutory exception
 and to the provisions of relevant collective licensing agreements,
 no reproduction of any part may take place without the written
 permission of Cambridge University Press.

First published 1988
 This digitally printed version 2009

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data

Vermeer, E. B. (Eduard B.)
 Economic development in provincial China : the central Shaanxi
 since 1930 / Eduard Vermeer.
 p. cm. – (Contemporary China Institute publications)
 Bibliography:
 Includes index.
 ISBN 0-521-34392-5
 1. Shensi Province (China) – Economic conditions. 2. Agriculture-
 Economic aspects – China – Shensi Province – History – 20th century.
 I. Title. II. Series.

330.951'17058–dc1987-22499 CIP

ISBN 978-0-521-34392-3 hardback
 ISBN 978-0-521-11543-8 paperback

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

CONTENTS

<i>Lists of Tables, Maps, Graphs and Plates</i>	<i>pages</i> viii–xv
Introduction, some problems of regional economic development	
1 The famine of 1928–1931	
a Political setting	28
b Natural causes	30
c Flight and death	31
d Relief measures	35
e Famine and a defective political and economic structure	37
f The fabric of the village	40
g Famine as a leveller?	42
2 Communications and transport	
a Traditional and modern transport before and during the war against Japan	47
b Transport under communism	55
c Regional, county and village transport in the 1960s and 1970s	61
3 The growth of Xi'an and industrial development	
a Xi'an before and after the railroad	70
b Wartime Xi'an: the political climate, industrial production and labour	75
c Industrialization and immigration during the 1950s	88
d City planning	102
e Food shortage and industrial crisis after the Great Leap Forward	108
f Industrial growth and an assessment of strengths and weaknesses in the 1980s	111
g The quality of urban life	126

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

vi

Contents

4	Physical aspects of a changing country	137
	a Deforestation and afforestation	138
	b Problems of water and soil erosion	146
	c Planning and the Sanmen Reservoir scheme	147
	d Improvement of slopes, gullies and plateaux	150
	e Organizational change	156
	f Reshaping the plain	159
5	Water conservancy and irrigation	
	a Yellow River control and ancient irrigation projects	182
	b Climate and water resources	185
	c Li Yizhi and the development of irrigation districts before and after 1949	192
	d Mechanical pumping and the extension of irrigation over the dry northern plain	209
	e The limits to water use in the 1980s	216
6	Cultivation practices, rising yields and agrotechnical change	222
	a Soils	224
	b Pig raising and green fertilizers	234
	c Wheat yields until the 1950s	237
	d Pigs and manure	243
	e Draught animals	246
	f Variety improvement	250
	g Crop patterns and output of foodgrains since the 1960s	256
	h Fertilizers	272
	i Mechanization of agriculture and ploughing depths	276
	Appendix: the agricultural calendar of Guanzhong in the 1970s	288
7	Cooperatives, Land Reform and collectivization	
	a Cooperatives under the Guomindang	290
	b Land Reform	296
	c Taxation and grain procurement until 1957	300
	d Cooperativization and collectivization	304
	e Back to individual farming	310
	f Successes and social pressures under the new system	314

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

<i>Contents</i>	vii
8 Cotton and cotton textile production	
a Background, climate and soil	324
b Introduction of cotton	325
c Cotton trade and industry until the war	332
d Cotton production, textiles and State intervention during the war against Japan	335
e Restoration, expansion and improvement during the 1950s	346
f Rising demands of the government and state textile industry	354
g Technical measures for raising cotton output	358
h Expansion of the cotton area	361
i Variety improvement	370
j Production inputs, costs and benefits	371
k Shifts and decline in the 1980s	375
9 An exploration into regional inequality	382
a Land use change	385
b Accessibility change	390
c Industrial change and location: a comparison of the 1940s and 1970s	392
d Landholding and social differentials in the 1930s	403
e Rural economic impact of the Guomindang government	408
f Regional differentials under communism: self-reliance and dependency	410
10 Concluding observations	418
<i>Appendix A: demographic data</i>	432
<i>Appendix B: survey data of 7 counties</i>	441
<i>Notes</i>	462
<i>Bibliography</i>	521
<i>Index</i>	530

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

TABLES

1	Railroads and highways in Shaanxi, 1949–1984	<i>page</i> 57
2	Volume of goods moved by County Transport Bureaus, 1957–1978	62
3	Relative shares of means of transportation used by County Transport Bureaus, 1965 and 1978	62
4	Draught animals in Shaanxi, 1933–1983	63
5	Volumes of freight and passenger transport by State organizations in Shaanxi, 1980 and within Xi'an municipality, 1981	65
6	Highways, population density and farmland area in 7 counties, 1965 and 1978.	66
7	Xi'an production labour force, various branches, 1937–1939	78
8	Labour wages and working hours in Shaanxi, various branches, 1937–1939	79
9	Relative prices of some raw materials and manufactured goods in Xi'an, 1937–1942/1943	82
10	Number of newly registered factories in Shaanxi, 1936–1944	84
11	Newly registered factories, capital and workers in some areas of Free China, and transferrals from the East	84
12	Industrial production in Shaanxi, 1945	85
13	Completed State investments in capital construction and housing in Xi'an, 1953–1957	91
14	Output increases of some major products in Xi'an, 1949–1956	95
15	Industrial labour and gross output value in Shaanxi, 1954	96
16	Industrial labour, gross and net output value in three types of industry in Xi'an, 1954 (Sept.) and 1955 (Aug.)	98
17	Gross Industrial Output Value of Xi'an municipality, 1949–1982	113

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)*Tables*

ix

18 Industrial production in Shaanxi, 1982–1984, and in Xi'an, 1982 and 1983	114
19 Economic performance indicators, Shaanxi (and China)	118
20 Professional structure by major branches, 1982	122
21 Non-employed population of Shaanxi, 1982	123
22 Foreign tourism in Shaanxi, 1978–1984	125
23 Some social services in Xi'an city, 1949–1982	127
24 Income and expenditure of 400 state enterprise workers' families in Xi'an, 1957 and 1981	130
25 Workers' wages and peasant net income in Shaanxi, 1978–1984	131
26 Development of collective and private economy in the cities of Shaanxi, 1980–1983	132
27 Land use in the Guanzhong plain and Weibei plateau, 1956	164
28 Farmland area in 7 counties, 1957–1978	164
29 Land use in 17 villages in 3 counties, 1941	165
30 Distribution of land ownership in the 4 districts of Wugong county, 1936	167
31 Plot sizes in Wugong, Weinan, Baoji and Nanxiong, 1941	168
32 Villages and administrative divisions of Huxian county, 1932	169
33 Average sizes of production teams and per capita amount of farmland, 1978	172
34 A. River flow resources of Guanzhong	190
34 B. Balance of water and land resources in Guanzhong	191
35 Irrigation ditches constructed in Guanzhong, 1930–1950	195
36 Traditional surface-flow and well-irrigation in Guanzhong counties, 1949	198
37 Production and water fees in irrigation districts, 1950	202
38 Irrigated area in 7 counties, Guanzhong, 1957–1978	212
39 Irrigated area in north Guanzhong, 1978–1979	213
40 Shaanxi wheat area, output and average yield, 1931–1958	240
41 Wheat yields in various counties of Guanzhong, 1940s till 1970s	242
42 Live pigs and draught animals in Shaanxi, 1949–1983	245
43 Draughts animals in 7 counties, 1957–1978	249
44 Maize yields in 7 counties, area and output, 1957–1978	257

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

x

Tables

45	Crop pattern in Shaanxi, 1949–1983	260
46	Crop distribution in Shaanxi, the Guanzhong plain and <i>hanyuan</i> , 1971, 1980–1983	260
47	Food grain supply to the State, 1974	265
48	Cultivated and sown area, food grain area and output, and rate of commercialization in Guanzhong counties, 1974	270
49	Output of various food grains in Shaanxi, 1979–1984	272
50	Pigs and chemical fertilizer use in 7 counties, 1957–1978	274
51	Chemical fertilizer output and use in Shaanxi, 1979–1984	277
52	Agricultural machinery in Shaanxi, 1962–1983	280
53	Tractors and hand tractors on the <i>hanyuan</i> and along the Wei River, 1978	282
54	Cooperatives in Guanzhong, August 1934	292
55	Loans, membership and capital of cooperatives in Guanzhong, 1935–1941	294
56	Redistribution by Land Reform	299
57	Summary of Shaanxi Provincial grain output, -taxes, -procurement, -resales, -surplus and -consumption 1953–1957, according to K. Walker	303
58	Shaanxi cotton acreage and output 1923–1939	326
59	Imports before and after the Longhai railroad reached Xi'an, 1932 and 1936	334
60	Cotton acreage, output and yields in Shaanxi during war time, 1937–1947	336
61	Cotton area, output and yields in 4 central counties, 1934–1947	338
62	Cotton output in large irrigation districts in Guanzhong, 1935–1949	339
63	Shaanxi cotton acreage, output and average yield, 1945–1960	350
64	Cotton output and sales (exclusive of peasant handicraft production) in Shaanxi 1936, 1949–1957	355
65	Cotton sown acreage data 1934–1975	362
66	Cotton output data, 1934–1957	364
67	Cotton acreage in some counties on the dry uplands north of the Wei River 1934–1975	368
68	Cotton: food grain exchange rates in China, 1952–1983	372

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

	<i>Tables</i>	xi
69 Cotton, wheat and maize State purchase prices in Guanzhong, 1957–1978		373
70 Cotton acreage, output and yield in Shaanxi, 1964–1984		376
71 Agrogeographical characteristics of <i>hanyuan</i> and plain, 1975		389
72 All county industries in seven counties, 1974–1978		397
73 Largest state-owned industries in seven counties, 1974–1978		398
74 Largest collectively-owned industries in seven counties, 1974–1978		400
75 Class differentiation in Fengxiang county, 1928 and 1931		404
76 Landholding per household and per capita of different classes in four villages in Weinan county, 1928 and 1933		405
77 Rural economic data for 6 counties, 1937		407
78 Average living expenses of a rural household in 1936 and 1941		411
79 Rural income data, 1957–1978		413
80 Economic and social indicators of 7 counties, 1978		416
<i>Appendix: A</i> Population growth in Shaanxi and China, 1949–1982		432
<i>B</i> Percentage of Shaanxi population residing in Xi'an, 1932–1982		434
<i>C</i> Shaanxi population 1929–1984		434
<i>D</i> Urban and suburban rural population of Xi'an, 1924–1983		436
<i>E</i> Vital statistics of Shaanxi and Xi'an, compared with national data, 1949–1984		438

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

MAPS

1	Guanzhong 1930	<i>page</i> 2
2	Distribution of population, 1935	25
3	Distribution of population, 1982	26
4	Construction of roads and railroad, 1928–1943	51
5	Main and secondary roads and railways, 1975	56
6	City sites of Xi'an, early Zhou till Ming/Qing	72
7	Administrative divisions, 1958–1961	101
8	Xi'an and surroundings, main factories, universities and hospitals, 1978	107
9	Mining and energy in Shaanxi, 1982	121
10	Chunhua county farmland, forests and roads, 1977	144
11	Qishan county settlements, 1936	160
12	Land arrangement in Yaohui PC, Gaoling county, 1975	175
13	Land arrangement plan for Yaohui PC, Gaoling county, 1975	176
14	Weinan county road and canal system, 1976	178
15	Accumulated temperature, evaporation and precipitation	186
16	Irrigated area, 1935	194
17	Jinghui irrigation district, 1972	208
18	Irrigation canals and salinized areas in the Luohui irrigation district, 1965	209
19	Dongfanghong irrigation district, 1972	210
20	Irrigation districts and reservoirs, 1979	214
21	Agricultural regions and products, 1980	223
22	Distribution of soils in Hancheng county	230
23	Soils and irrigation canals of Wugong county, 1977	231
24	Soil nutritional elements in Liquan county, 1977	232
25	Average wheat yields, 1941–1945	239
26	Fertilizer application in winter, 1957–1958	247
27	Crop distribution in the counties of Guanzhong, 1975	258

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

	<i>Maps</i>	xiii
28 Maize area 1975		261
29 Millet area 1975		262
30 Sorghum area 1975		263
31 Food grain yields 1974		267
32 Government designated commercial bases, 1984		273
33 Average cotton yields 1934–1938 and 1941–1945		340
34 Cotton acreage 1946		341
35 Cotton acreage 1975		366
36 Cotton acreage percentage change between 1934 and 1975		369

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

GRAPHS

A	Guanzhong 1936 population pyramid	<i>page</i> 33
B	Shaanxi gross output value of light industry and consumption goods purchase power, 1949–1980	111
C	Village sizes in Huxian, 1932	170
D	Xi'an and Yan'an, monthly precipitation–evaporation	187
E	Wei River and Jing River monthly flow averages	188
F	Silt content of the main rivers in Guanzhong and North Shaanxi	189
G	Cross-sections of the Wei River Valley, Qianxian and Wugong	228
H	Organic matter content and calcium carbonate content of soils	229
I	Average wheat yields in Shaanxi, 1931–1984, and China, 1949–1983	243
J	Food grain output and sheep stock in North Shaanxi, 1949–1982	264
K	Food grain acreages and average yields in the counties of Guanzhong, 1974	268
L	Unit yields of cotton, Shaanxi and China, 1926–1983	327
M	Population of Shaanxi and China 1949–1983	433

Cambridge University Press

978-0-521-11543-8 - Economic Development in Provincial China: The Central Shaanxi since 1930

Eduard B. Vermeer

Frontmatter

[More information](#)

PLATES

1	Gate tower and eastern city wall of Xi'an	<i>page</i> 71
2	The Baoji–Xi'an section of the Wei River valley	140
3	The Wei River valley downstream of Xi'an	141
4	Peanut fields on the Yellow River bed in Hancheng	153
5	A reclaimed part of the Jinghe River bed in Fenghuo Brigade, Liquan county	183
6	Construction of terraces	226
7	Draught cattle and tractor, Chunhua county	251
8	Wooden and iron ploughs, Weinan county	279
9	Blacksmiths repairing a blade	395
10	Chalk factory in a Weinan village	401