

Distribution Orientation and Driving Mechanism of Geographical Pattern Change of China's Banking Industry

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2019年4月27日

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01

Introduction

Introduction

The spatial pattern of banking industry exerts a great impact on regional development.

- Developed countries : influences the life of the people in different regions.
- Developing countries : determine the economic development capacity of each region.

The research of economic geography on pattern, process and mechanism indicates that, influenced by different driving forces and driving mechanisms, the same geographical phenomenon may choose different distribution locations and form different spatial patterns.

For banking industry

- **Economic benefit maximization——market**
- **Service opportunity equality——government**

02

Theories and Methods

- ❑ Spatial patterns of banking industry under market drive and under government control
- ❑ Two forms of banking industries and their spatial patterns
- ❑ Change of spatial pattern of banking industry under distribution orientation
- ❑ Methods and indicators
- ❑ Data preparation

Spatial patterns of banking industry under market drive and under government control

Distribution Orientation and Driving Mechanism of Geographical Pattern Change of China's Banking Industry

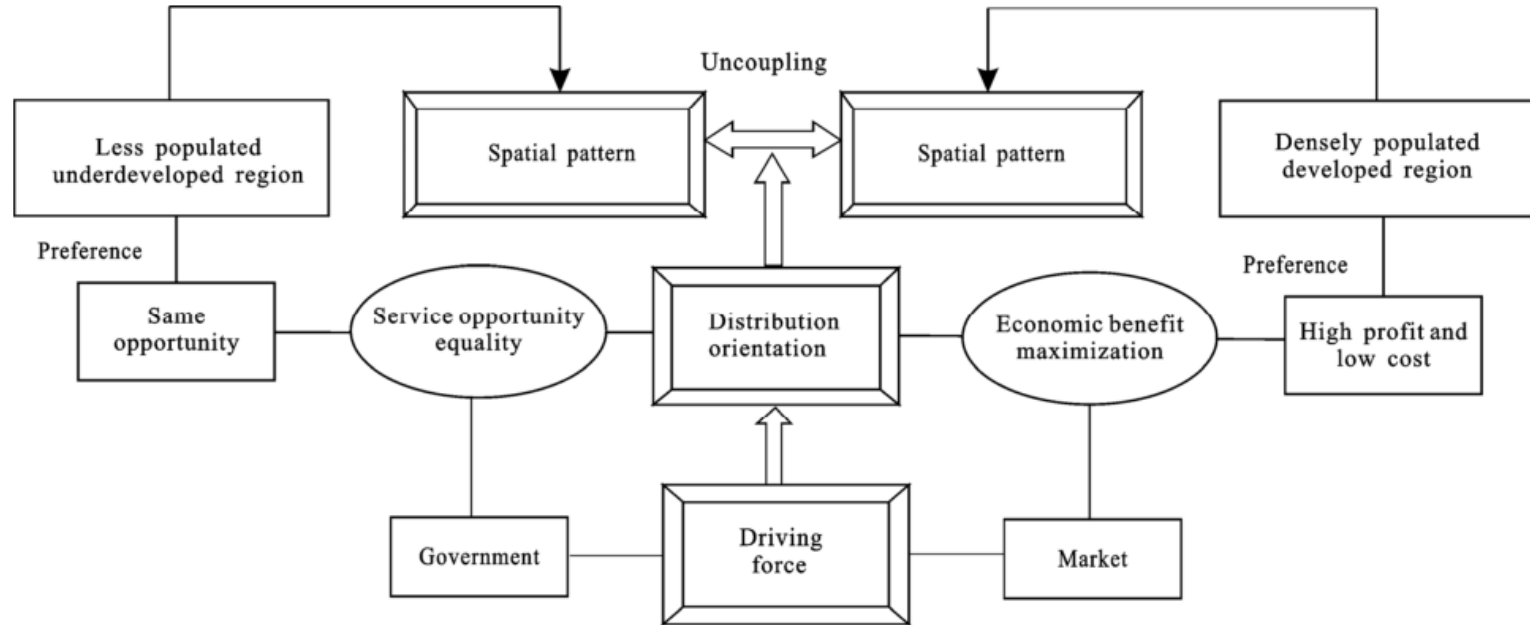


Fig. 1 Spatial pattern of banking industry under different driving forces and distribution orientation

Two forms of banking industries and their spatial patterns

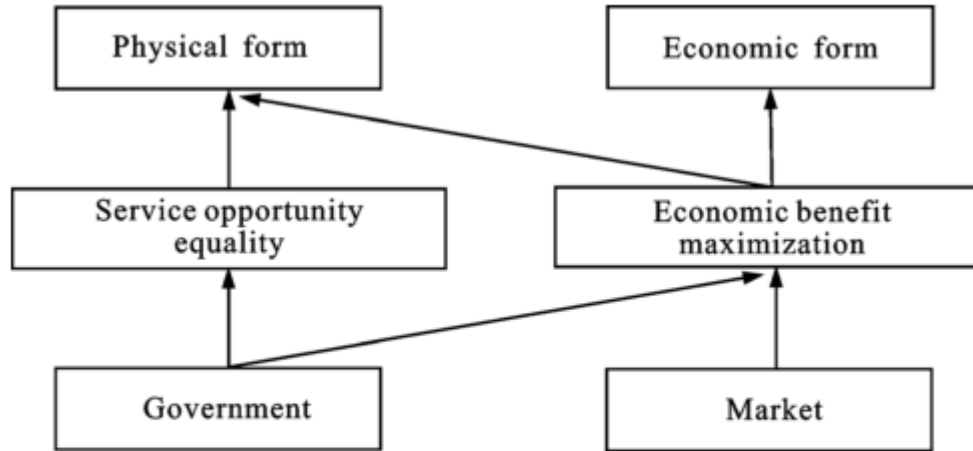


Fig. 2 Driving force, distribution orientation and two forms of banking industries

It is not driving forces (market or government) but the change of distribution orientation that is the necessary and sufficient condition for the change of spatial pattern.

Change of spatial pattern of banking industry under distribution orientation

Table 1 Driving forces, distribution orientation and spatial patterns

Case	Form	Market		Government		Pattern	Uncoupling
		Benefit maximization	Benefit maximization	Service opportunity equality			
I	Physical	√				Unbalanced	
	Economic	√					
II	Physical			√		Unbalanced	
	Economic			√			
III	Physical				√	Balanced	√
	Economic			√		Unbalanced	
IV	Physical				√	Balanced	√
	Economic	√				Unbalanced	

The degree of change of the spatial pattern depends on

- the degree of change in distribution orientation
- the scale of the bank resources in the regions that support the change of orientation (the regions with remarkable preference change).

Methods and indicators

Basic indicators——change of spatial patterns

- The proportion of the bank branches
- loans accounting for the national total

Compound indicators——orientation of spatial distribution

- PCC (population carrying capacity per unit branch=total population/number of bank branches)
- GDPL (GDP required for unit loan=GDP/loan scale)

The correlation coefficient of the compound indicators with population density and per capita GDP

Positive (service opportunity equality)

The scales of population and of GDP required by unit bank branch and unit loan are

- **small in regions with sparse population and low level of economic development**
- large in regions with dense population and high level of economic development

Negative (economic benefit maximization)

The scales of population and of GDP required by unit bank branch and unit loan are

- **small in regions with dense population and high level of economic development**
- large in regions with sparse population and low level of economic development

Data preparation

The data of the bank branches and loans came from various yearbooks and the China Banking Regulatory Commission (CBRC).

Bank branch data of 1995 were summarized from the data described in Almanac of China's Finance and Banking 1996 (CSFB,1997), and those of 2007 were worked out based on the Regional Finance Development Report 2007 of each province, municipality, and autonomous region.

The Data of the volume of bank loans in 1995 came from Comprehensive Statistical Data and Materials on 55Years of New China (NBSC, 2005), and those of 2007 came from the China Statistical Yearbook for Regional Economy 2008 (NBSC, 2009).

The data of the volume of branches and loans respectively in market-driven and government-driven banks were sorted out based on the Almanac of China's Finance and Banking 1996, and Distribution Map of Rural Financial Services of Bank-ing Industry in China (CBRC, 2008).

03

Spatial Pattern Changes of Banking Industry in China

- ❑ Feature of spatial pattern change
- ❑ Change of distribution orientation
- ❑ Differentiation of physical and economic forms

Feature of spatial pattern change

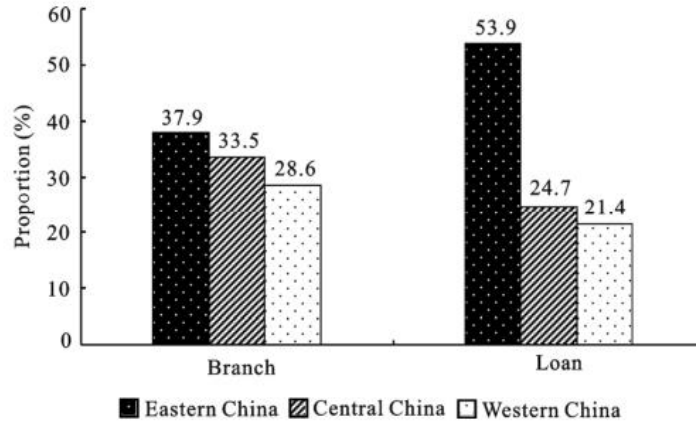


Fig. 3 Proportion of branches and loans in eastern, central and western China in 1995

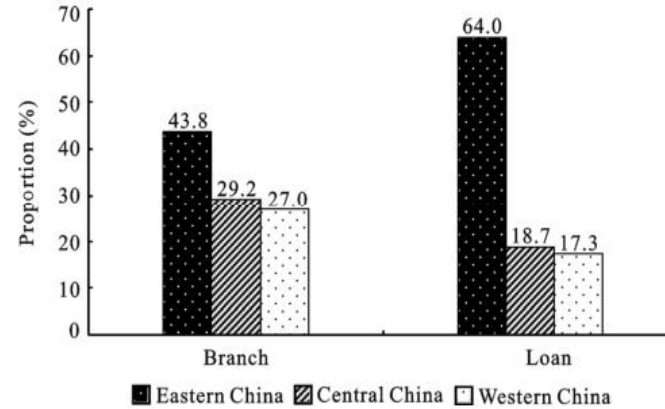
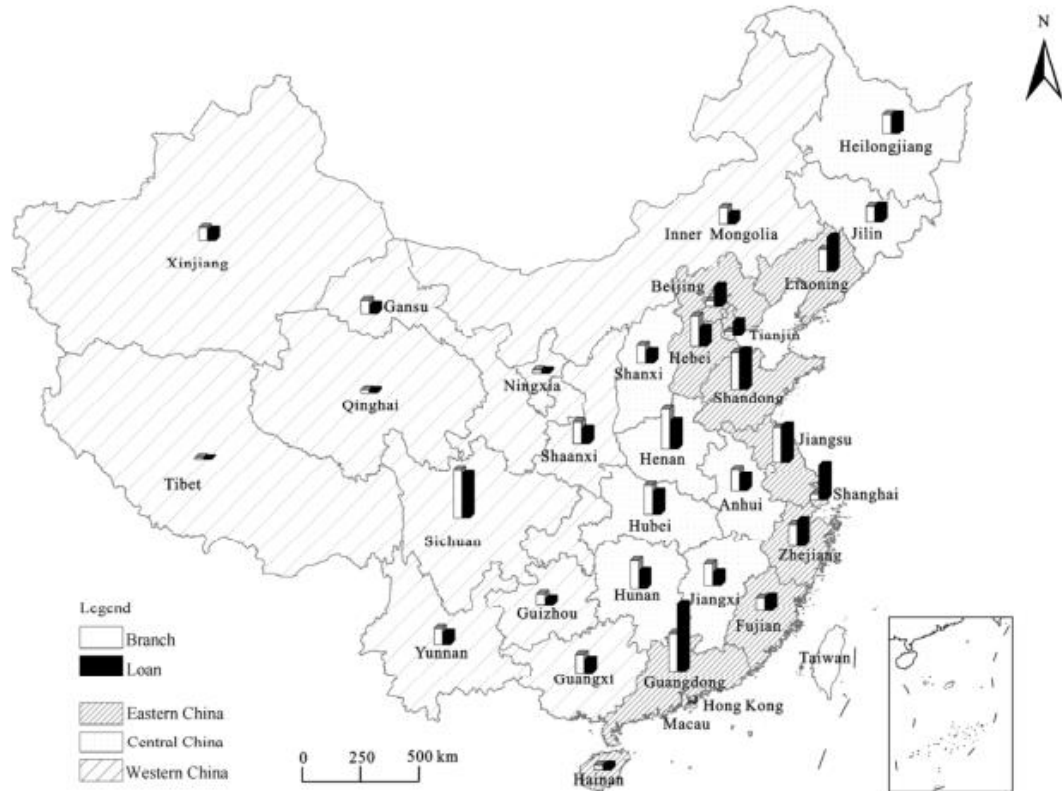


Fig. 5 Proportion of branches and loans of eastern, central and western regions in 2007

Both bank branches and loans concentrated to the eastern China.

Feature of spatial pattern change



Taiwan, Hong Kong and Macao are not included

Fig. 4 Proportion of branches and loans of each region in national total in 1995

Feature of spatial pattern change

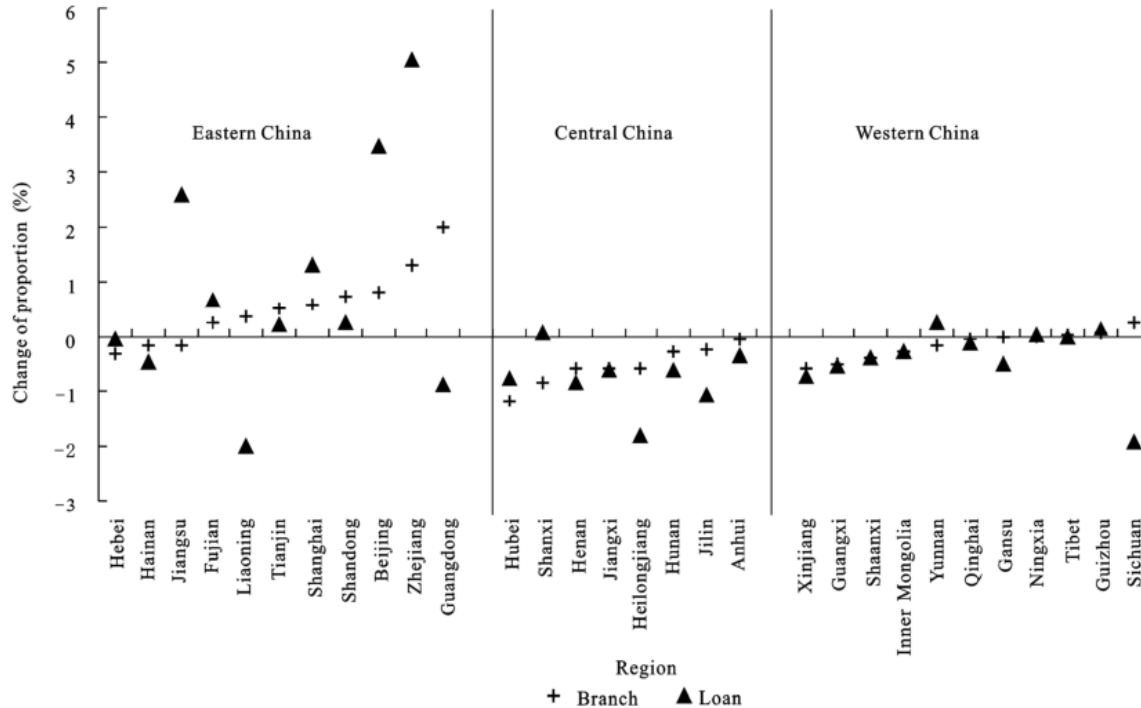


Fig. 6 Change of proportion of bank branches and bank loans in each region in 1995–2007

The higher the degree of the economic development of the regions is, the higher the degree of concentration will be.

It is not the case that the largest decrease of the bank branches and loans occurred in most underdeveloped regions.

The degree of change of bank loan' spatial pattern was notably larger than that of the bank branches.

Distribution orientation in 1995 and 2007

1995—Service opportunity equality

PCC and GDPL had positive relationships with the population density ($R=0.35$, 0.05)

A weak positive relationship ($R = 0.05$) and negative relationship ($R = -0.12$) existed between PCC, GDPL and per capita GDP.

2007—economic benefit maximization

PCC and GDPL had negative relationships with the GDP per capita ($R=-0.50$, -0.44)

The PCC and GDPL had a negative relationship with the population density ($R=-0.40$, -0.13)

With the weakening of the service opportunity equality and the strengthening of economic benefit maximization, banks are tending to prefer economically developed regions instead of the less developed regions.

Changes of orientation of government and market forces

Table 2 Banks under government power and market force in 1995 and 2007

Bank	1995			2007		
	Government share	Government regulation	Mode	Government share	Government regulation	Mode
State-owned	Many	Strong	Government-driven	Few	Weak	Market-driven
Credit cooperative	Many	Strong	Government-driven	Many	Strong	Government-driven
Post office savings	Many	Strong	Government-driven	Many	Strong	Government-driven
Policy	Many	Strong	Government-driven	Many	Strong	Government-driven
Joint-equity	Few	Weak	Market-driven	Few	Weak	Market-driven
Foreign	None	Weak	Market-driven	None	Weak	Market-driven

Notes: Credit cooperative bank includes rural/urban credit cooperation and rural/urban commercial banks. So far, the investors of credit cooperative, post office savings, and policy banks are governments.

Changes of orientation of government and market forces

Table 3 Orientation of market-driven and government-driven banks in 2007

	Market-driven bank		Government-driven bank	
	PCC	GDPL	PCC	GDPL
Per capita GDP	-0.63	-0.45	-0.05	-0.13
Population den-	-0.30	-0.42	0.03	-0.14

Table 5 Distribution of government-driven bank branches and loans (%)

	1995		2007	
	Branch	Loan	Branch	Loan
Eastern China	37.87	53.9	39.69	54.91
Central China	33.52	24.7	31.44	24.24
Western	28.61	21.4	28.87	20.85

Table 4 Impact of different driving forces on overall pattern change (%)

	Change of bank branch proportion			Change of bank loan proportion		
	Government-driven	Market-driven	Total change	Government-driven	Market-driven	Total change
Eastern China	1.10	4.81	5.91	0.31	9.79	10.10
Central China	-1.28	-3.02	-4.30	-0.13	-5.87	-6.00
Western China	0.18	-1.79	-1.61	-0.19	-3.91	-4.10
Total impact	2.56	9.62	-	0.63	19.57	-

Notes: 1. Data have been normalized, and total changes in each area are proportion change of banking industry, the same below; 2. Total impact is sum of absolute value of change of bank branch proportion and change of bank loan proportion

Changes of orientation of government and market forces

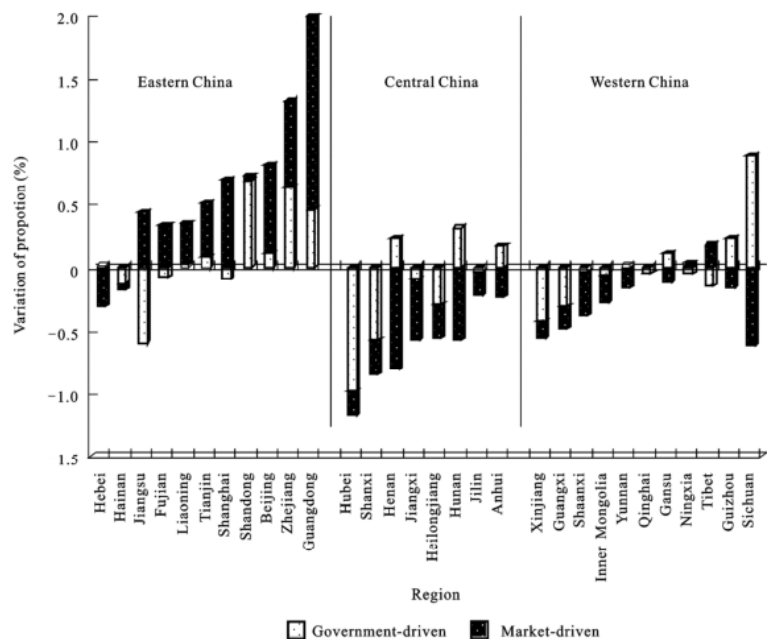


Fig. 7 Influence of different driving forces on pattern change of bank branches in 1995–2007

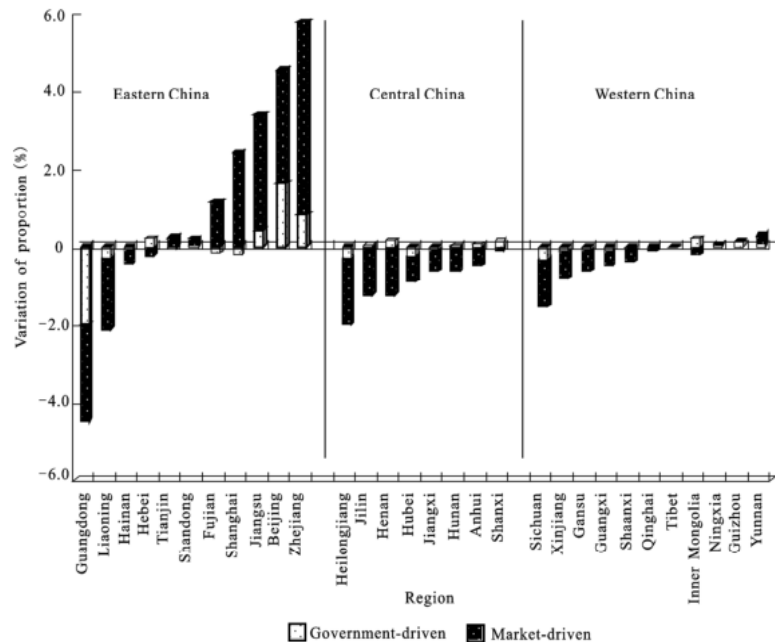
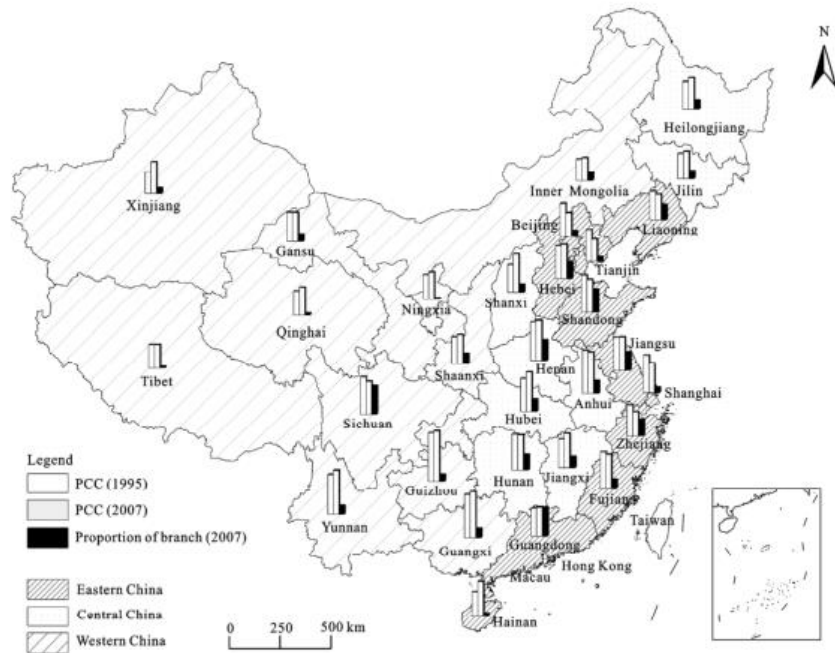


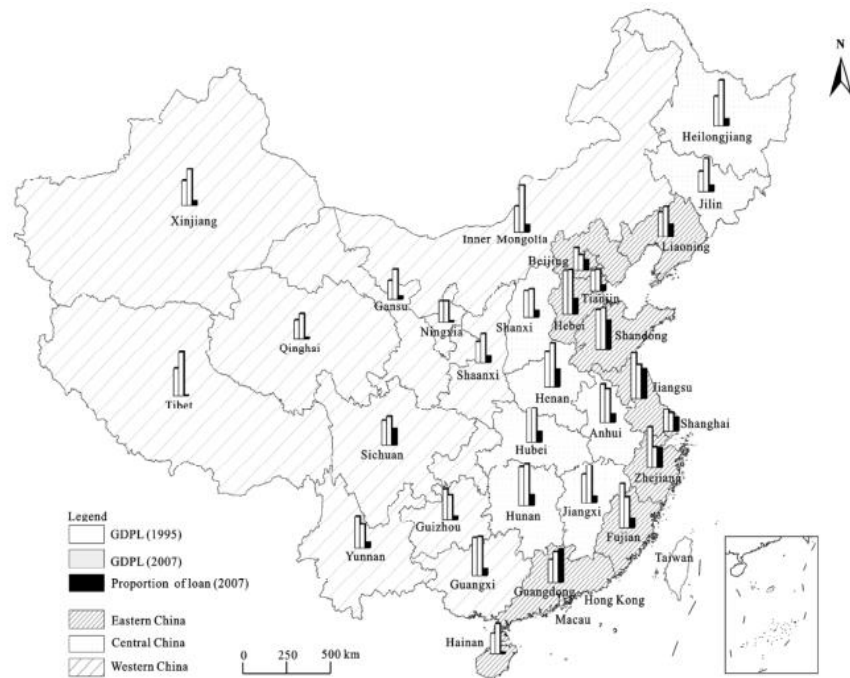
Fig. 8 Influence of different driving forces on pattern change of bank loans in 1995–2007

Differentiation of physical and economic forms



Taiwan, Hong Kong and Macao are not included

Fig. 9 Change of preference of bank branch distribution in each region



Taiwan, Hong Kong and Macao are not included

Fig. 10 Change of preference of bank loan allocation in each region



Differentiation of physical and economic forms

The degree of change in distribution orientation of physical form of banking industry (from service opportunity equality to economic benefit maximization) is much more remarkable than that of economic form (from service opportunity equality to no significant orientation).

However, since the bank branches in the regions with the greatest change in preference (regions with remarkable PCC change) are too few, and the bank loans in the regions with the greatest change in preference (regions with remarkable GDPL change) are large, the change of the physical form is not as notable as that of economic form.

04

Discussion and Conclusions

Discussion and Conclusions

- The differences of distribution orientation lead to the separation of the spatial pattern, while change of distribution orientation leads to the change of spatial pattern.
- The degree of change of spatial pattern is subject to the change degree of distribution orientation, and the bank resources in the regions that support the change of orientation.
- The orientation of economic benefit maximization of market-driven banks causes the spatial pattern change of the banking industry. The government-driven bank which does not follow the orientation of economic benefit maximization plays a role of stabilizer.

Government regulates the operation mechanism and operation system of banking industry, and **change of policies** may be the primary and fundamental cause for the change of market factor and the change of the spatial pattern of banking industry.

谢 谢 聆 听

T H A N K Y O U F O R L I S T E N I N G