

**Towards a Collaborative Pattern  
of the Constitutional Trinity in  
China: The Double Helix  
Perspective**

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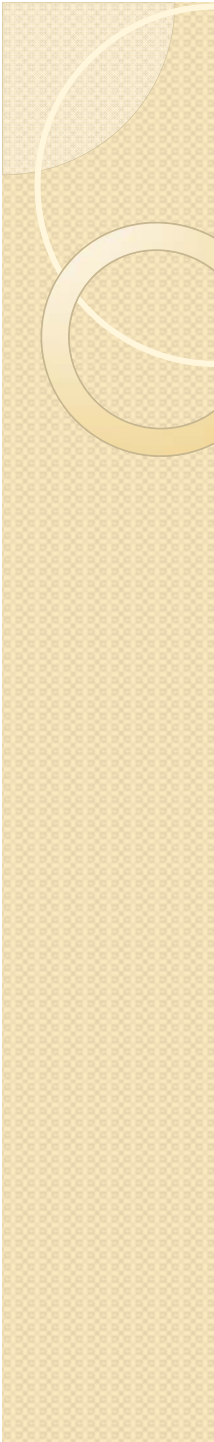
# Introduction

- China has been in transition.
- Build a good theory to account for the great transformation of contemporary China .
- This paper puts forth a collaborative framework of the constitutional trinity.
- Based on the census data of corporate entities, test the hypothesis of the double helix structure of institutional changes across regions and through time.



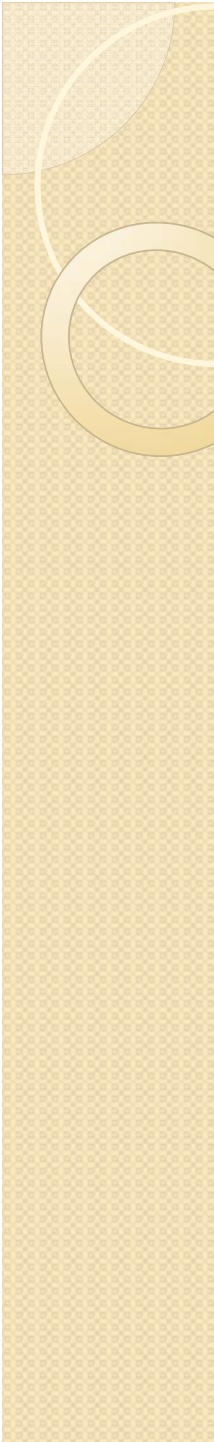
# **A Collaborative Framework of the Constitutional Trinity**

- From the dichotomy of government and market to the trichotomy of government, market, and civil society.
- Several presuppositions are set forth for the collaborative framework of the constitutional trinity.
- First of all, a market economy is jointly ruled by civil society and the state.

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- Second, civil society as the *res publica* is related to the economy through market society and to the state through political society.
  - Third, civil society as the commonwealth means a compound republic in terms of a consociation of consociations for the sake of federal liberty.
  - Finally, towards a civil constitutionalism means building the partnerships between the state, the economy, and the society as a new paradigm of governance for the common good.

# Figure 1 The Covenantal Partnerships of Three Sectors

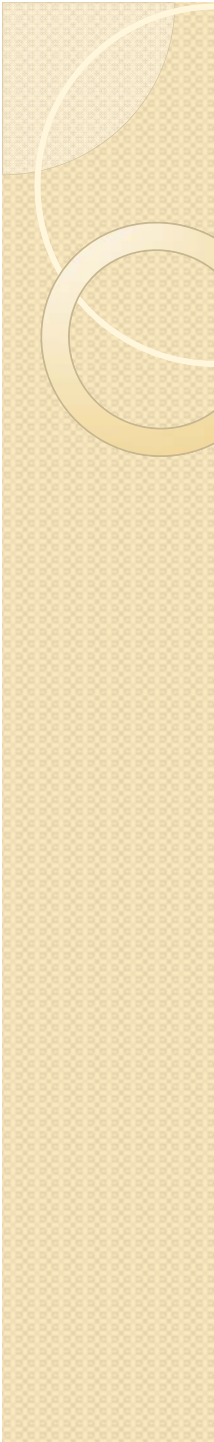
		Ownership (Principal)		
		Public Sector	Private Sector	Third Sector
Control (Agent)	Public Sector	Government departments/ agencies	Public utilities/natural monopolies	Local communities/ neighborhood corporations
	Private Sector	State-owned enterprises/ governmental corporations	Private enterprises	Charitable organizations/ non-governmental organizations
	Third Sector	Public institutions/ non-profit organizations	Social enterprises	Voluntary associations/ civic engagement

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- There are derived nine ideal types of corporate action from the covenantal partnerships between the three sectors, which are as follow: (1) the public-public type; (2) the public-private type; (3) the public-third type; (4) the private-public type; (5) the private-private type; (6) the private-third type; (7) the third-public type; (8) the third-private type; and the (9)the third-third type.



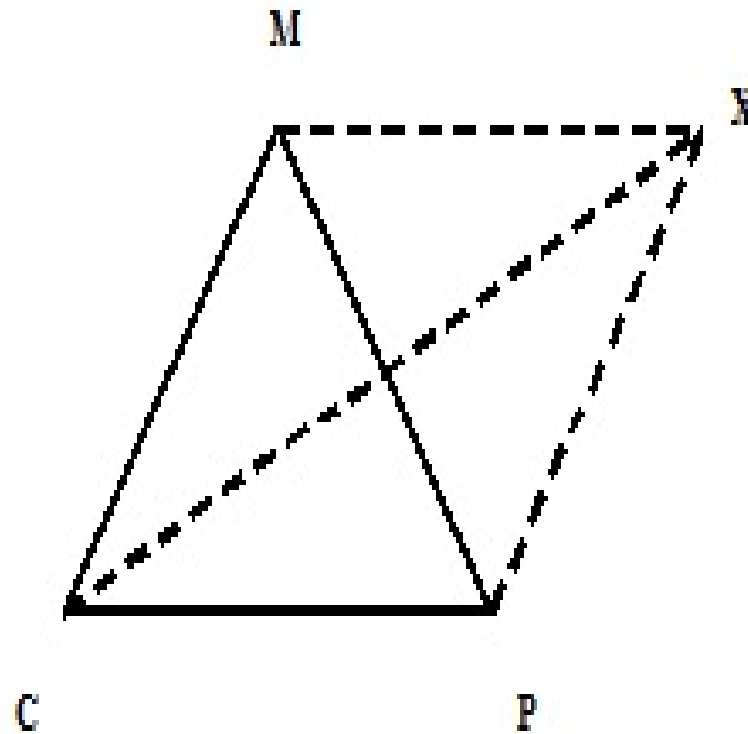
# Methodology and Data Description

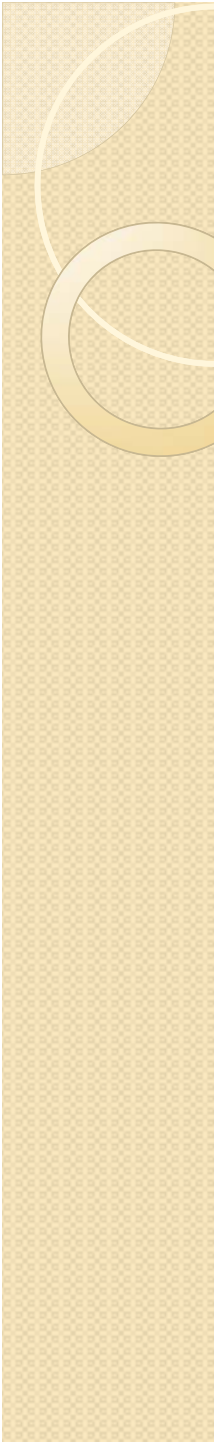
- The progress of science has consisted perpetually in analyzing complex systems into unvarying constituents.
- The methodological strategy of the complex composite systems lies in using systems as components for constructing larger systems.
- Modularization is the crafting core of a synthetic microanalytic approach to the many-body systems.

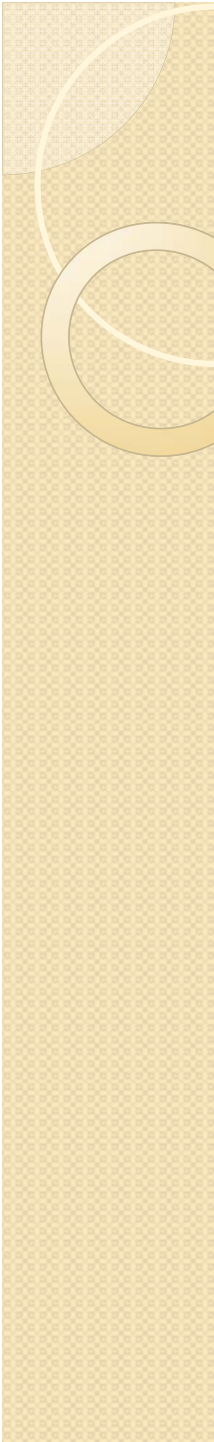
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- Factor analysis is able to map an interdependent (composite) matrix of measurable indicators (manifest variables) into a structural (constituent) matrix of latent variables (common factors).
  - The dynamic triangle relationships of political state (public sector), market economy (private sector), and civil society (third sector) represent all the institutional changes, which can be clearly shown through elementary vector geometry.



## Figure 2. Dynamic Triangle Relationships of Institutional Changes



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- Given a vector is by definition a directed line segment in a coordinate system, all the institutional changes among civil society, market economy, and political state can be indicated by both the sum (Vector CX) and the difference (Vector PM) of Vector CP and Vector CM.
  - The nine ideal types of corporate entities are resulted from the covenantal partnerships between civil society (C), market economy (M), and political state (P), which can be located on the three line segments respectively of the triangle CMP.

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- The nine ideal types of corporate entities can be treated as the indicators of the covenantal partnerships of public, private, and the third sectors.
  - Thus, factor analysis as a decoupling method can be used to decompose the correlation matrix between the indicators above into the unobservable components (factors).
  - The two-factor pattern solved is therefore expected to reflect metaphorically the double helix structure of institutional changes.

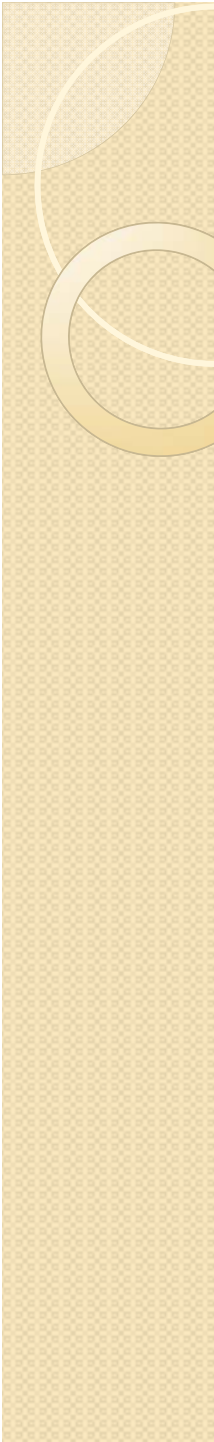
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- Based on the Census Center of the National Bureau of Statistics of China, corporate entities (legal persons) were grouped into five categories:  
(1) governments; (2) institutions;  
(3) enterprises; (4) communities; and (5) associations.
  - Structurally, the distribution patterns of corporate entities by types are pretty much consistent nationally across regions and through time (see Table I).

Table 1. Overview of Corporate Entities by Type Share (%)

		Government	Institution	Enterprise	Community	Association
1996	National	6.37	13.86	59.70	19.06	1.01
	Mean	8.24	15.42	54.57	20.47	1.30
	S.D.	4.60	6.38	16.40	9.66	1.12
	C.V.	0.56	0.41	0.30	0.47	0.86
2001	National	6.06	16.48	59.73	15.63	2.10
	Mean	8.40	17.94	53.47	17.84	2.35
	S.D.	5.45	7.15	17.84	9.24	0.81
	C.V.	0.65	0.40	0.33	0.52	0.34

Notes: S.D. denotes standard deviation, and C.V. denotes the coefficient of variation. In addition, the 2001 data of Chongqing and Sichuan are merged for the sake of comparison, and the 2001 data of Institution include the People-Run non-Enterprise Units. d

*Data Source:* National Bureau of Statistics of China



# The Emerged Double Helix Structure

- The interdependent structure of the type shares can be indicated by the Pearson correlation matrix of the type shares.
- As for the 1996 data set, the type share of enterprises is negatively correlated with all the other type shares of governments, institutions, communities, and associations at the statistical significant levels (see Table 2).

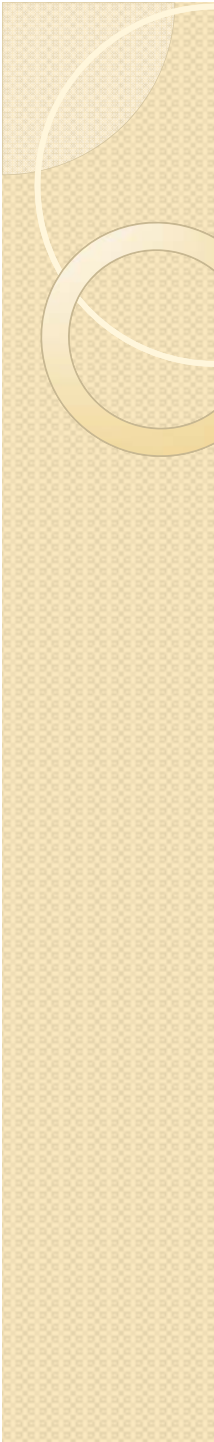
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- Moreover, the type share of governments is positively correlated with the type shares of institutions, communities, and associations at the statistical significant level, and meanwhile the type share of communities has a positive correlation with the type share of associations.
  - Finally, there is no correlation of the type share of institutions with the type shares of communities and associations.

Table 2. Pearson Correlation Matrix of Five Type Shares, 1996

	Government	Institution	Enterprise	Community	Association
Government	1.00				
Institution	0.48**	1.00			
Enterprise	-0.91**	-0.55**	1.00		
Community	0.67**	0.05	-0.84**	1.00	
Association	0.66**	-0.03	-0.58**	0.58**	1.00

Notes: \* significant at 0.05 level; \*\* significant at 0.01 level. The case of Tibet as an outlier is excluded from calculation.



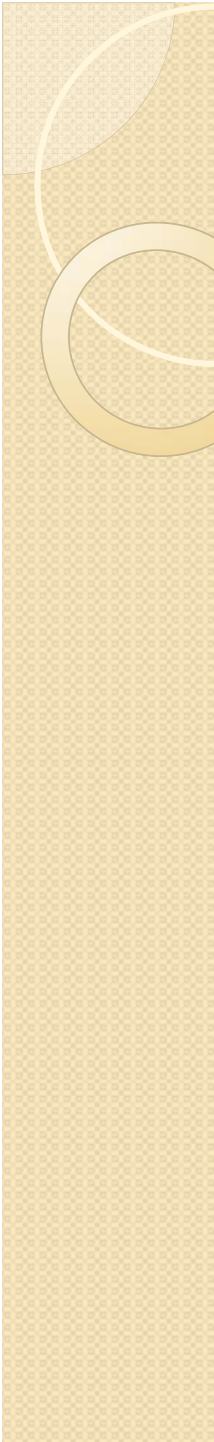
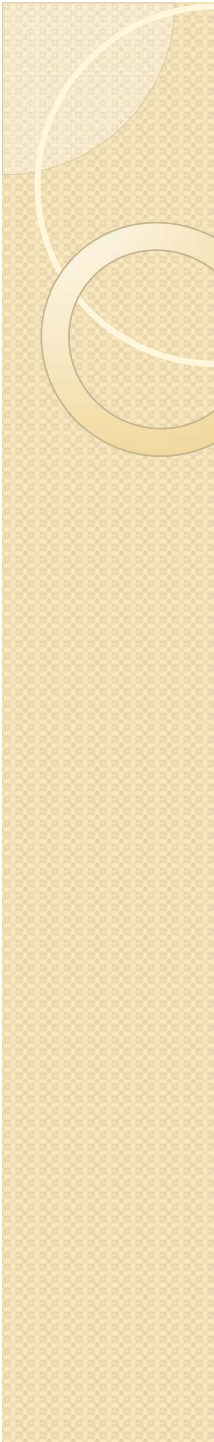
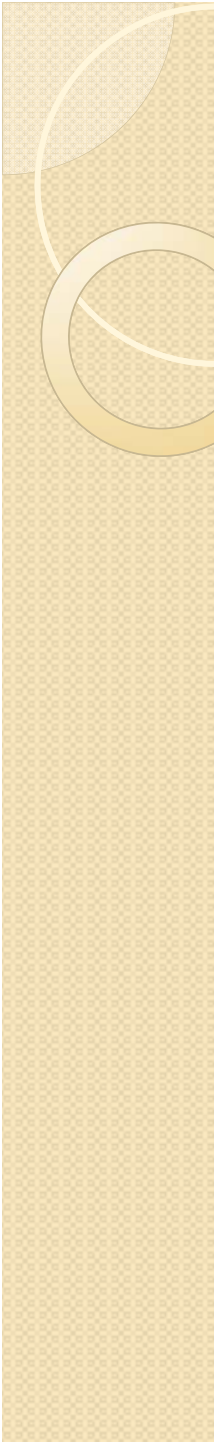
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- By the same token, the Pearson correlation matrix of five type shares on the basis of the 2001 census data set shows the type share of enterprises is negatively correlated with the type shares of governments, institutions, communities, and associations at the statistical significant levels (see Table 3).
  - In addition, the type share of governments has significantly positive correlations with the type shares of institutions and communities except the type share of associations.

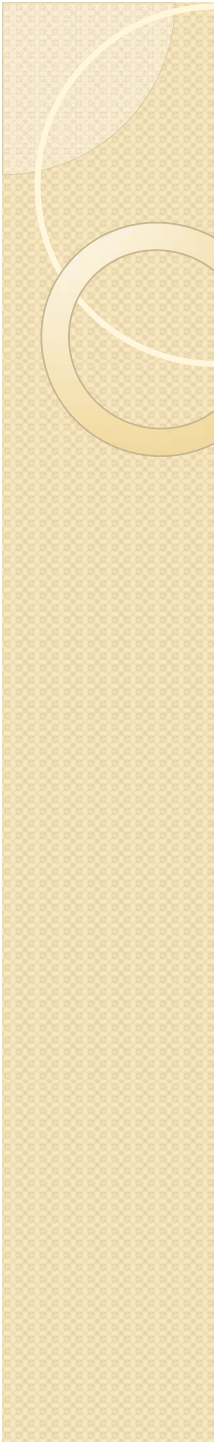
Table 3. Pearson Correlation Matrix of Five Type Shares, 2001

	Government	Institution	Enterprise	Community	Association
Government	1.00				
Institution	0.36*	1.00			
Enterprise	-0.91**	-0.62**	1.00		
Community	0.85**	0.19	-0.88**	1.00	
Association	0.35	0.35	-0.41*	0.24	1.00

Notes: \* significant at 0.05 level; \*\* significant at 0.01 level. The case of Tibet as an outlier is excluded from calculation. The data of Chongqing and Sichuan are merged for the sake of comparison.

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- Unlike the case of the 1996 data set, there is no correlation between the type share of communities, the type share of associations, and the type share of institutions.
  - It seems to conclude that enterprises are singled out from governments, institutions, communities, and associations, which may show market-economy-oriented institutional change.

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- Correspondingly, the corporate entities classified by type shares are hypothesized to be a reduced version of the formation and distribution of nine ideal types of corporate entities discussed above.
  - All the enterprises of the state-owned, the private, the social, and public utilities are combined together as the ideal type of enterprises, and meanwhile all voluntary associations and charitable organizations are combined together as the ideal type of associations. Government departments, local communities, and non-profit organizations are respectively categorized as the ideal types of governments, communities, and institutions.

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- Hypothetically, just as the two diagonal lines of CP and CX in Figure 2 represent all the institutional changes, the separation of governments from enterprises represents one dimension of institutional change, and the separation of communities from institutions represents another dimension of institutional change.
  - Thus, two factor solutions of exploratory factor analysis are expected to spell out the latent structure of the double helix of institutional changes.

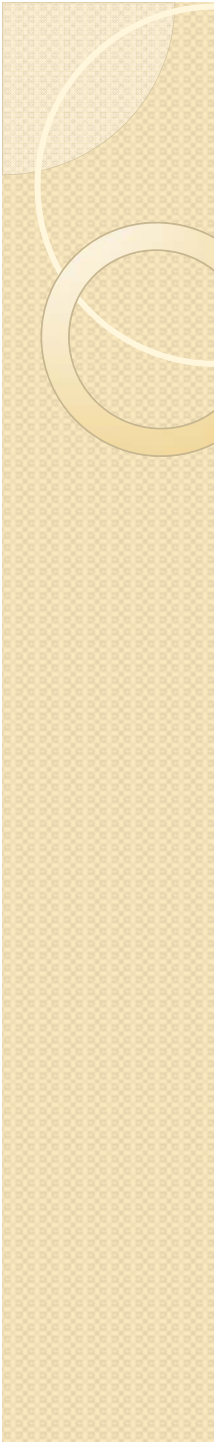
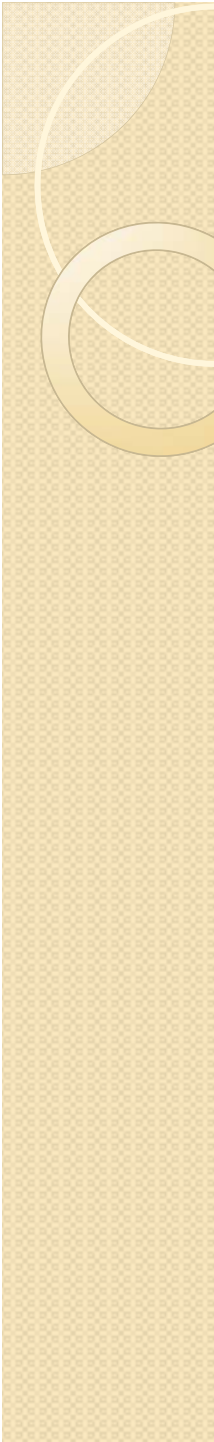
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- The two factor solutions with respect to the first and second census data sets of corporate entities in China are shown in Table 4.
  - Principal component method is applied for factor extraction. Generally, the latent structures of two common factors are almost the same across time from 1996 to 2001.

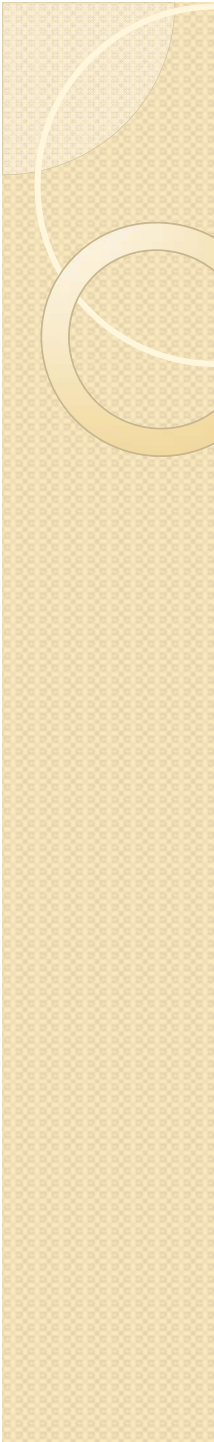
Table 4. Factor Loadings Matrix

	1996		2001	
	Factor 1	Factor 2	Factor 1	Factor 2
Government	0.94	0.10	0.92	-0.25
Institution	0.44	0.88	0.59	0.61
Enterprise	-0.98	-0.14	-0.99	0.05
Community	0.83	-0.34	0.86	-0.45
Association	0.73	-0.47	0.52	0.60
Eigenvalue	3.27	1.14	3.19	1.00

Note: Factor extraction by principal component method.

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- The first factor separates enterprises from governments together with institutions, communities, and associations, which indicates the market-economy-oriented institutional change for enterprises are singled out as the engine of economic growth.
  - The second factor separates communities from institutions, which shows the civil-society-oriented institutional change just as Ferdinand Tönnies (1957/1887) argued for the conceptual separation of territorial community from functional society.



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- To a great extent, the latent structure of the two common factors above can be metaphorically understood as the double helix structure.
  - The two base pairs of the double helix structure are as follows: (1) governments (adenine) to enterprises (thymine); and (2) territorial communities (guanine) to functional institutions (cytosine).

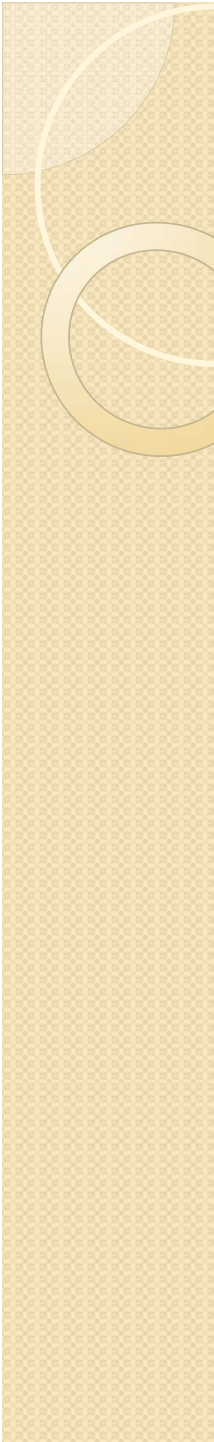
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- To test the genetic evolution of the double helix structure, two factor scores across time are used to calculate the correlations between them (see Table 5).
  - Evidently, the first factor 2001 is significantly correlated the first factor 1996, and the second factor 2001 is significantly correlated the second factor 1996. However, the significant correlations are not found between the first factor 2001 and the second factor 1996 and between the first factor 1996 and the second factor 2001.

Table 5. The Correlation Matrix of Two Factor Scores across Time

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	The first factor 2001	The second factor 2001
The first factor 1996	0.93**	0.16
The second factor 1996	-0.25	0.53**

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Notes: \* significant at 0.05 level; \*\* significant at 0.01 level.

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# Regional Grouping of Institutional Changes

- The institutional reforms of contemporary China show regional experimental characteristics.
- With the two factor scores, the scatter plot of all the regions is mapped out to reflect the regional gradient there (see Figure 3 and Figure 4), indicating the path of incremental reforms (institutional changes) through time.

Figure 3. The Scatter Plot of Two Factor Scores, 1996

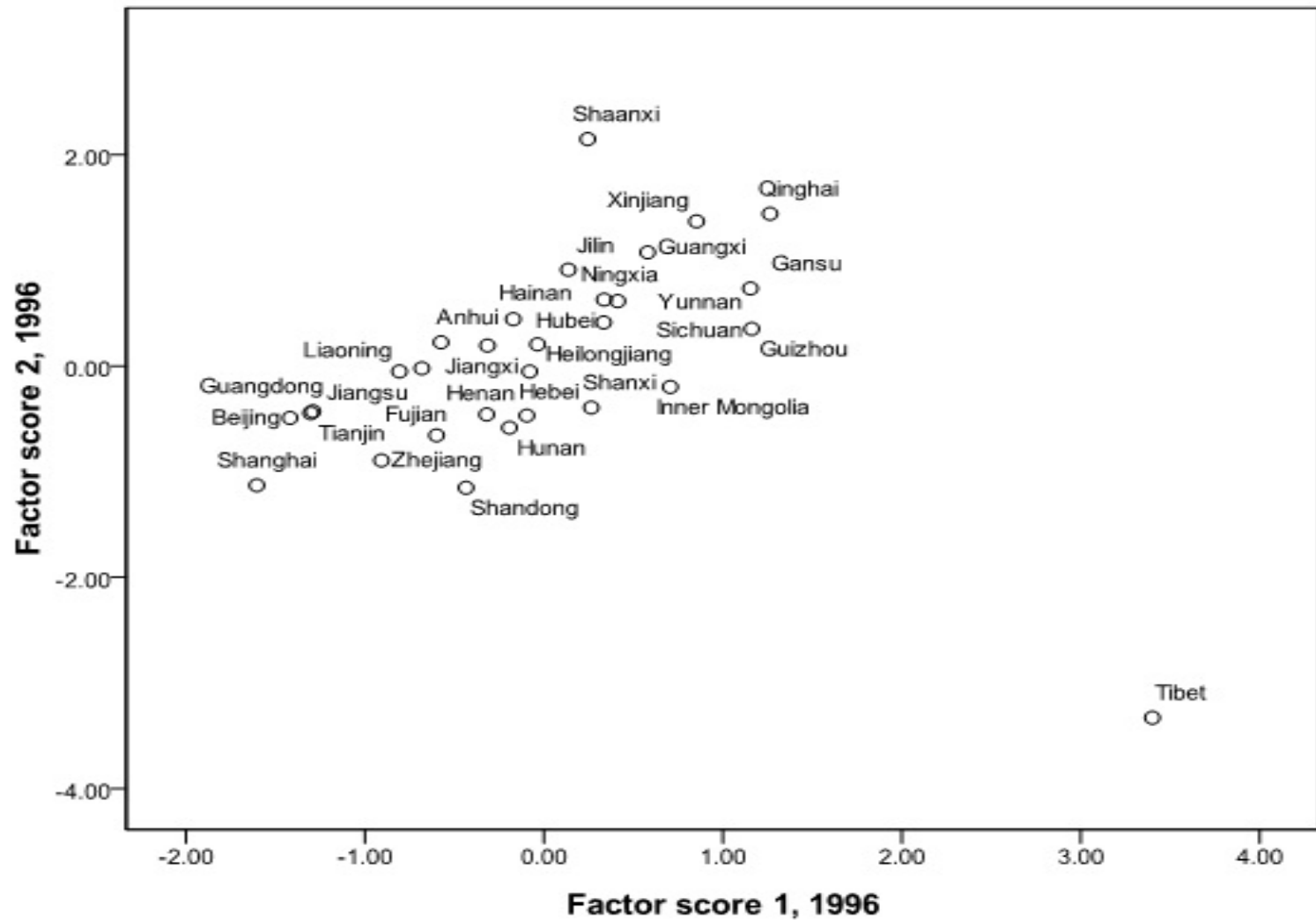
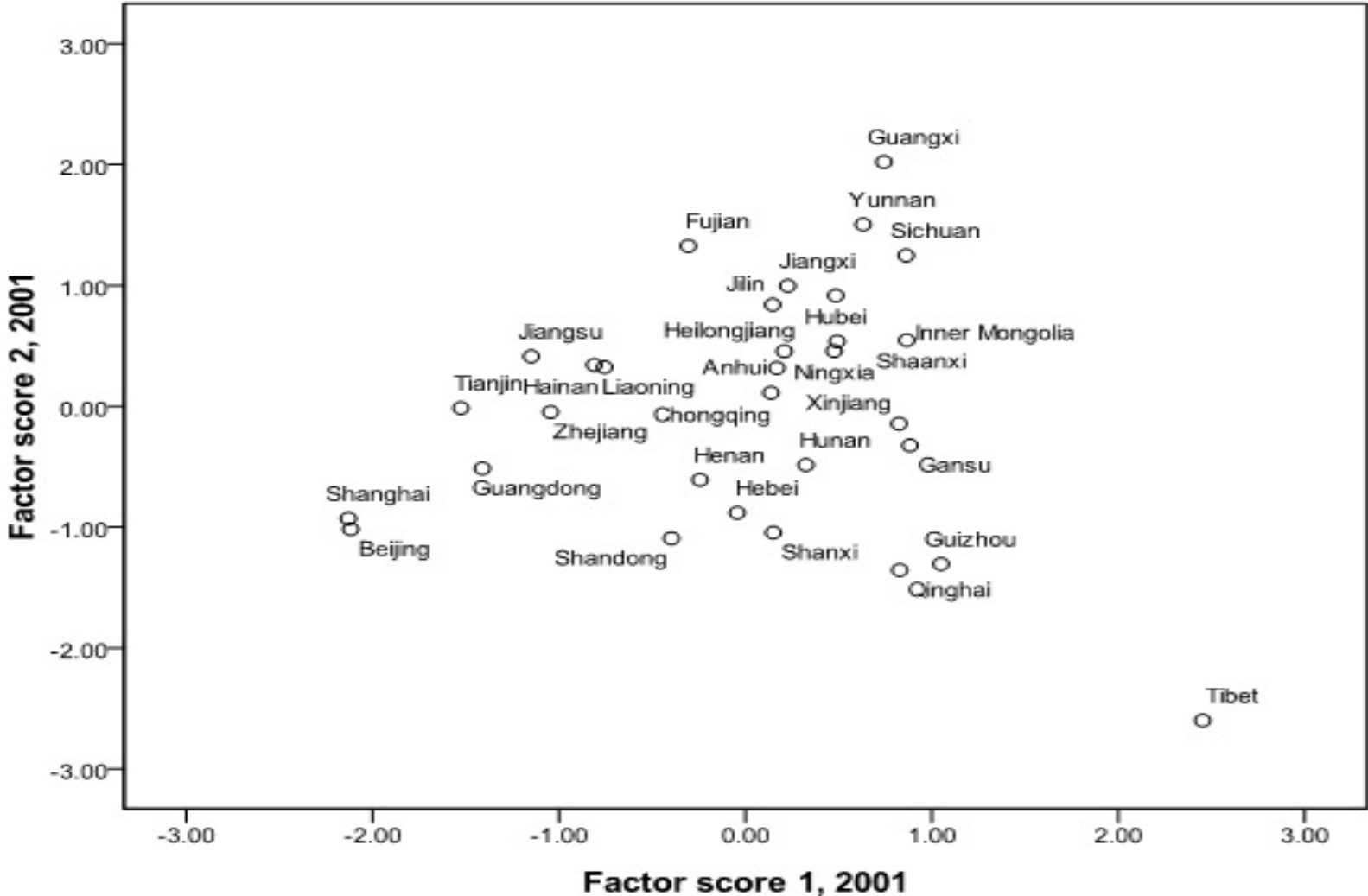


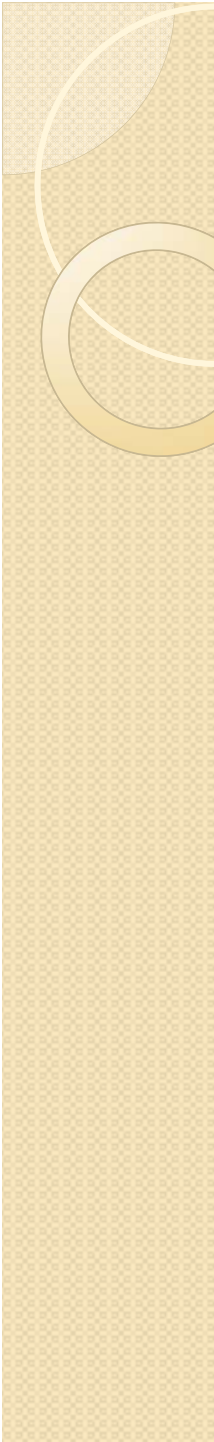
Figure 4. The Scatter Plot of Two Factor Scores, 2001



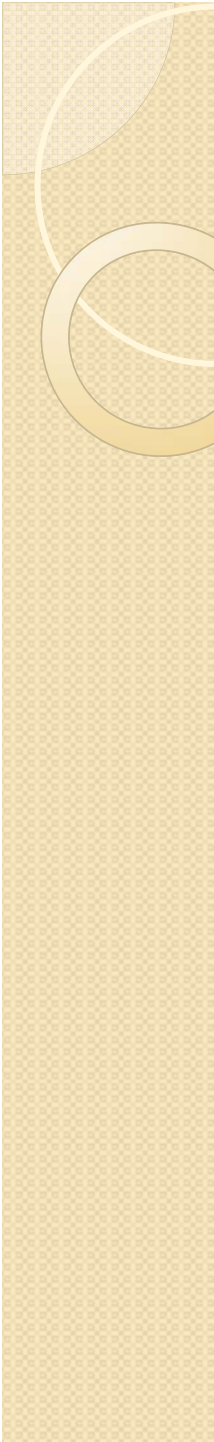


# Concluding Remarks

- The old mixed economy of government and market has been challenged since the early 1990s.
- Scholars of the Third Way advocate the new mixed economy of government, market, and civil society in reflection of the emerging third sector worldwide.

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- The trinity of political state, market economy, and civil society is constitutionally ordered in terms of the rules spectrum.
  - Provided that political state corresponds to formal rules and civil society corresponds to informal rules, market economy is institutionally embedded in the mixed rules of political state (formal rules) and civil society (informal rules).



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- The Chinese institutional changes as a great transformation are characterized with the incremental reforms strategy of regional trials and errors, through which an emerged regional gradient shows that the market-economy-oriented institutional change came first and then the civil-society-oriented institutional change, and meanwhile that the coastal regions went a step ahead and then the inner regions caught up.