The Explanation to Immigration Growth Difference between The Developed and Developing Countries

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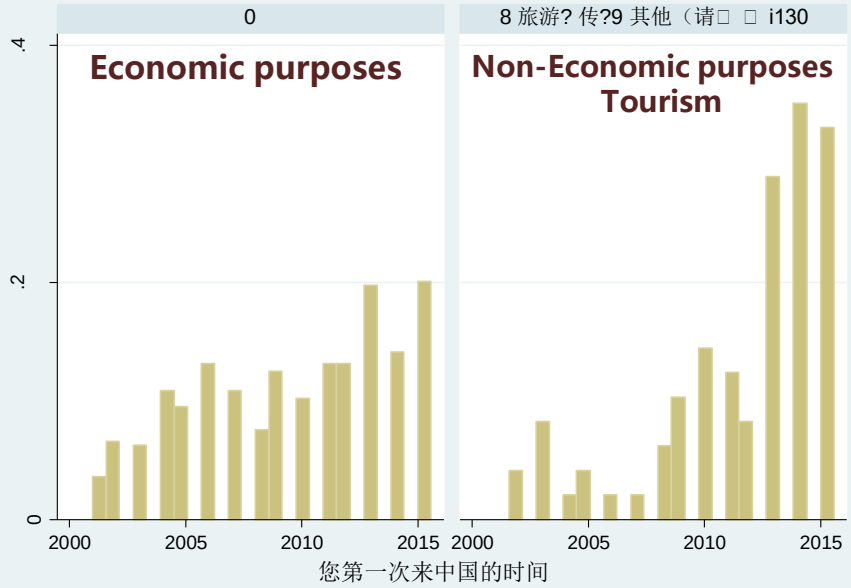
Background (1)

- Under the background of the opening-up policy, China's export-oriented economy has developed further. China has become the world's second largest economy and exporter over more than 30 years of rapid economic growth.
- Increased communication and cooperation between China and other countries has led to a rise in the number of foreigners who come to China.
- Nearly all international immigrants in China belong to middle class.

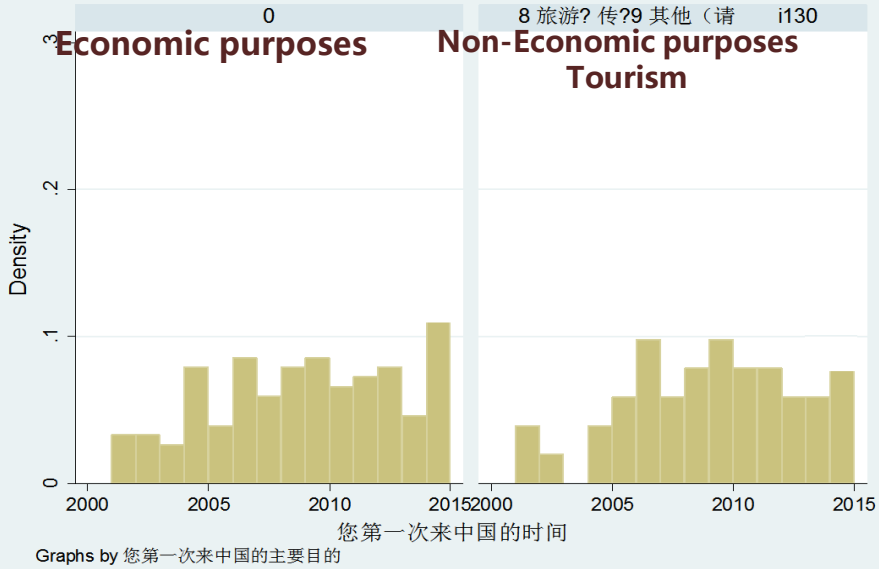
Background (2)

- The result of the Sixth Population Census shows that the total number of international immigrants is one million, 62% of them are located in 3 Metropolitan Cities of China: Beijing, Shanghai, and Guangdong.
- Guangdong takes the highest proportion - more than one third.
- Guangzhou, the capital city of Guangdong province, differs from Beijing and Shanghai in that among the international immigrants who live in Guangzhou and nearby cities, developing countries' immigrants make up the highest proportion.

Developing countries



Developed countries



- Why non-economic purposes visitor increase in develping countries meanwhile developed countries is not?
- Why economic purposes and non-economic purposes have the same pattern?

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OUTLINE OF TOPIC / RESEARCH PROBLEM

International Migration in Metropolitan City of China

- coexist:
  - Increasing **Economic purposes** immigrant in China.
  - Increasing **Non-Economic purposes** visitor (e.g. International Tourist) in China.

- Any connection between them? What's the machnism? Explain how **Economic** & **Non-Economic purposes** visitor flows evolve through a reciprocal process of cause-and-effect between the structures that induce international movement.

Cumulative Causation Theory

- Each act of migration influences the potential of subsequent acts of migration.
- If receiving countries ‘welcomes’ immigrants that will increase the likelihood of more immigration.
- Cumulative Causation is sort of the self-perpetuation theory of migration.

- social capital theory

- social network theory

(Ammassari and Black, 2001; Massey, 1998; Massey et al., 1998; 1993; 1987; Montanari, 2002)

Possible explanation

"visa - purpose "Joint Distribution

	To do business on your own	To work for a multinational corporation	To explore business opportunities	To work for a homeland company	To work for a Chinese company	Follow family members or visit relatives	Exchange student orresearch as visiting scholar	To travel as a tourist
L Visa = Tourist visa	14. 9%	6. 6%	14. 6%	10. 7%	6. 9%	23. 7%	10. 4%	30. 7%
F Visa & M Visa= Business Visa	46. 0%	24. 9%	39. 4%	32. 1%	18. 1%	12. 2%	9. 9%	15. 8%
Z Visa = Work Visa	20. 8%	52. 8%	24. 1%	38. 4%	56. 9%	21. 8%	17. 5%	22. 3%
X Visa = Student Visa	5. 4%	3. 6%	10. 2%	6. 3%	6. 0%	19. 2%	55. 2%	21. 4%
C Visa = Crewmember Visa	1. 0%	0. 5%	0. 4%	0. 0%	0. 0%	0. 0%	0. 0%	0. 0%
J Visa = Journalist Visa	0. 2%	0. 5%	0. 0%	0. 0%	0. 0%	0. 6%	0. 3%	0. 6%
G Visa = Transit Visa	0. 7%	0. 0%	1. 1%	0. 0%	0. 0%	1. 3%	0. 3%	0. 3%
D Visa = Residence Visa	11. 1%	11. 2%	10. 2%	12. 6%	12. 1%	21. 2%	6. 6%	9. 0%
Total	611	197	274	159	116	156	395	323

Possible explanation

"visa - purpose "Joint Distribution

	To do business on yourown	To work for a multinational corporations	To explore business opportunities	To work for a homeland company	Toworkfora Chinesecompany	Follow family members/ or visit relatives	To study as an exchange student or to do research as visiting scholar	To travelasatourist
Developed								
L Visa = Tourist Visa	57.9%	8.3%	23.1%	4.2%	7.7%	33.3%	23.3%	28.9%
F Visa& M Visa = Business Visa	42.1%	12.5%	34.6%	45.8%	11.5%	8.3%	20.0%	26.7%
Z Visa = Work Visa	36.8%	58.3%	46.2%	20.8%	69.2%	29.2%	36.7%	28.9%
X Visa = Student Visa	0.0%	0.0%	0.0%	4.2%	0.0%	33.3%	36.7%	24.4%
C Visa = Crewmember Visa	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
J Visa = Journalist Visa	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	2.2%
G Visa = Transit Visa	5.3%	0.0%	7.7%	0.0%	0.0%	4.2%	0.0%	0.0%
D Visa = Residence Visa	15.8%	25.0%	11.5%	29.2%	19.2%	20.8%	6.7%	17.8%
Developing								
L Visa = Tourist Visa	3.4%	1.4%	4.9%	0.0%	0.0%	2.1%	0.6%	5.0%
F Visa& M Visa = Business Visa	15.4%	5.6%	11.5%	7.8%	0.0%	27.7%	7.2%	31.7%
Z Visa = Work Visa	51.1%	29.6%	41.8%	35.3%	17.6%	17.0%	7.2%	19.8%
X Visa = Student Visa	22.2%	57.7%	24.6%	47.1%	64.7%	23.4%	18.3%	16.8%
C Visa = Crewmember Visa	5.6%	5.6%	16.4%	9.8%	17.6%	29.8%	66.1%	25.7%
J Visa = Journalist Visa	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
G Visa = Transit Visa	1.1%	0.0%	0.8%	0.0%	0.0%	0.0%	0.6%	1.0%
D Visa = Residence Visa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

mean purpose number: **I.17**

mean purpose number: **I.93**

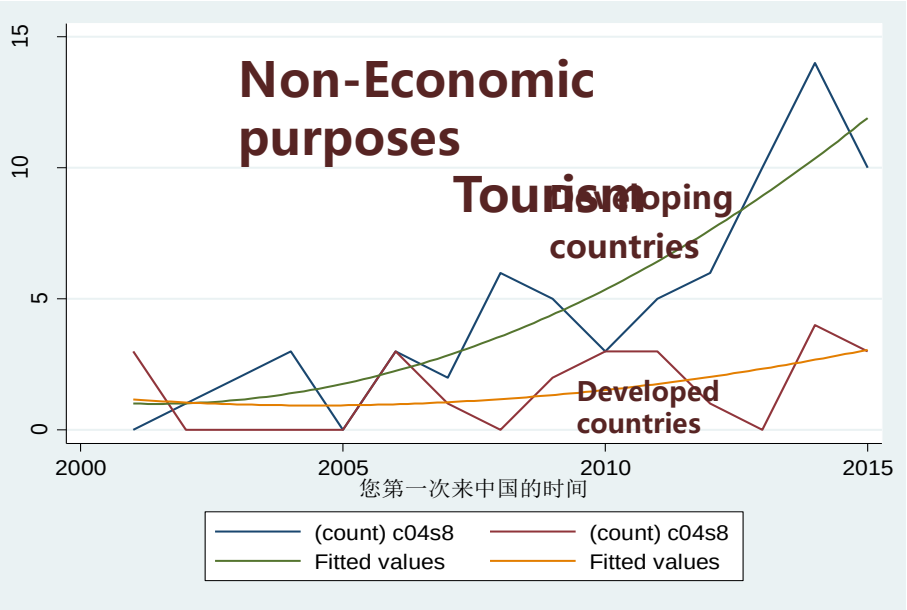
Possible explanation

By **"visa - purpose "Joint Distribution, we find that**:

- Foreigners have multiple purposes simultaneously.
- Foreigners coming from developing countries have more purposes than peoples from developed countries;
- Foreigners coming from developing countries have less propotion of non-economic purposes than peoples from developed countries.

KEY RESEARCH QUESTIONS

- Does non-economic purposes visitor have self-reinforcing mechanism like immigration's cumulative causation?
- If the answer is yes, then what's it? Why non-economic purposes visitor increase in develping countries meanwhile developed countries is not?



RESEARCH HYPOTHESES

Visitors coming for multiple purposes will help actors to reduce costs. Therefore:

- **H1:The multiple-purpose visiting is more often happens in visitors from developing countries than from developed countries.**

Multiple purpose will help actors get bigger and more stable social networks. Therefore:

- **H2: During non-economic purposes visiting process, if they have more purpose, there also exist cumulative causation effect, it will increasing their social network.**

DATA

- Collected at Public Security Bureau hall during January 2016;
- With 14 kinds of languages, Computer Aided Investigation method.
- Nearly 1500 foreigners data.

METHODOLOGY

Quantitative research methods

- Coincidence Analysis（CAN）
- Regression
- Multilevel Model

Coincidence analysis（CAN）——Definition

Coincidence analysis is a set of techniques whose object is to detect which people, subjects, objects, attributes or events tend to appear at the same time in different delimited spaces.

These delimited spaces are called n scenarios, and are considered as units of analysis (i).

In each scenario a number of J events X_j may occur (1) or may not (0) occur.

We call incidence matrix $(\mathbf{X})$ an $n \times J$ matrix composed by 0 and 1, according to the incidence or not of every event X_j.

In order to make comparative analysis of coincidences, these scenarios may be classified in H sets

CNA ——Mere and probable events

Two events (X_j and X_k) are defined as 1) **merely** coincident if they occur in the same scenario at least once:

$$[\exists_i(x_{ij} = 1 \wedge x_{ik} = 1)] \vee f_{jk} \geq 1$$

Additionally, two events (X_j and X_k) are defined as 2) **probably** coincident if they occur more frequently than if they are independent:

$$f_{jk} > \frac{f_{jj} f_{kk}}{n}$$

CAN ——Statistically probable events

And two coincidences are 3) **statistically probable** if the joint frequency of their events meets one of the following inequalities:

$$\mathrm{P}(r_{jk} \leq 0) < c$$
$$\mathrm{P}(\theta_{jk} \leq 1) < c$$
$$\mathrm{P}(\mathrm{p}(X_j) - \mathrm{p}(X_j|X_k) \leq 0) < c$$

- where r_{jk} is the Haberman residual, θ_{jk} is the odd ratio, and the third equation represents a one tailed Fisher exact test. Furthermore, c is the selected level of significance, normally 0.05)

CNA ——Definition for statistically probable events

Two events j and k can be considered adjacent according to the following rule:

$$A[j,k] = 1 \Leftrightarrow [\mathrm{P}(r_{jk} \leq 0) < c] \wedge j \neq k$$

Therefore, a $J \times J$ matrix **A** may be elaborated with 0 valued diagonal elements and 1 in the case where r_{jk} is significantly below the level c. Other elements should also be 0.

From **A** the $J \times J$ distance matrix **D**, with geodesics (shortest paths between nodes), can be obtained.

CNA ——Definition for mere and probable coincidences

By extension, other adjacency matrices can be elaborated following

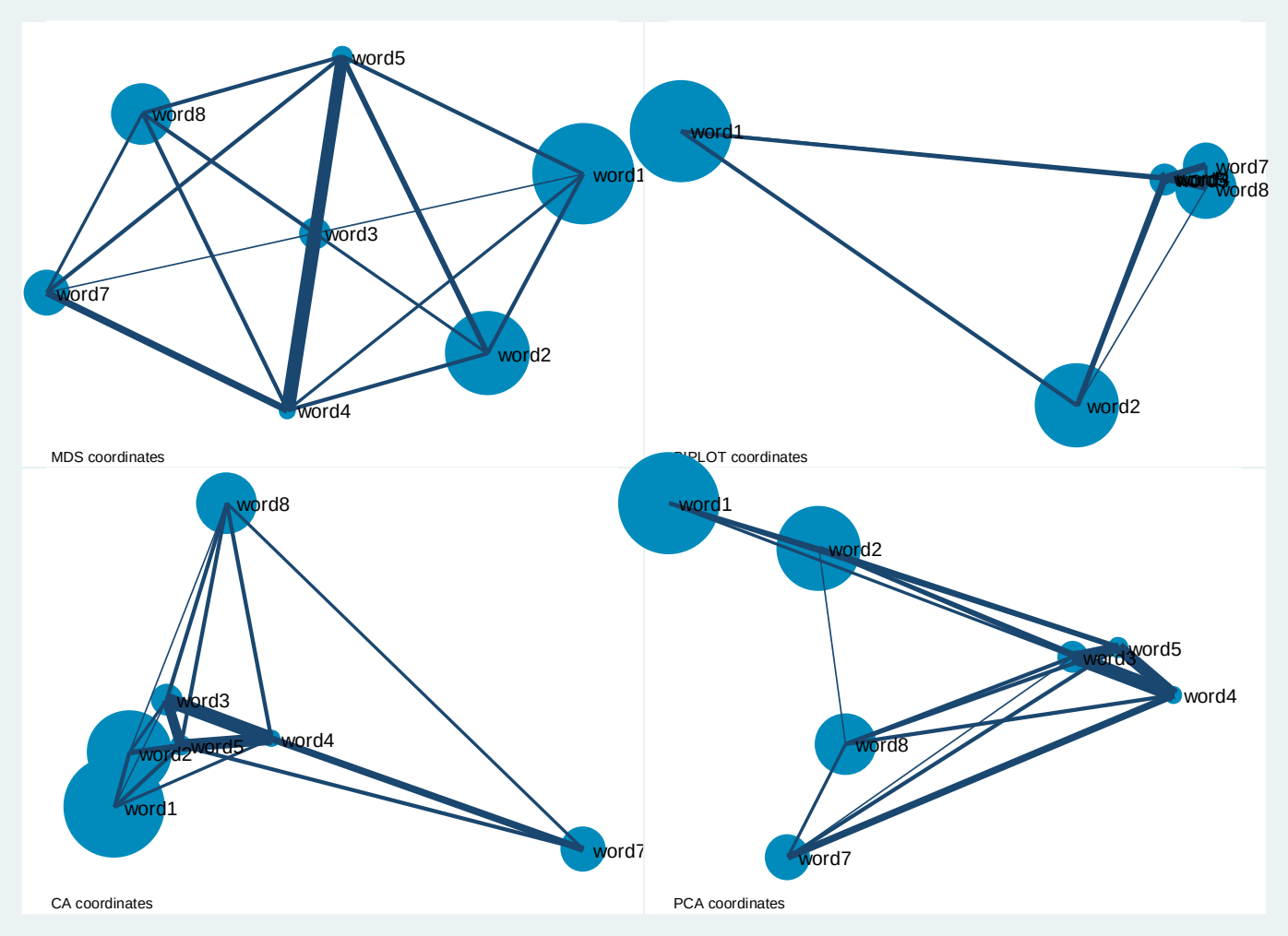
- Mere coincidence criterion

$$A[j,k] = 1 \Leftrightarrow f_{jk} \geq 1$$

- Or probable coincidence criterion

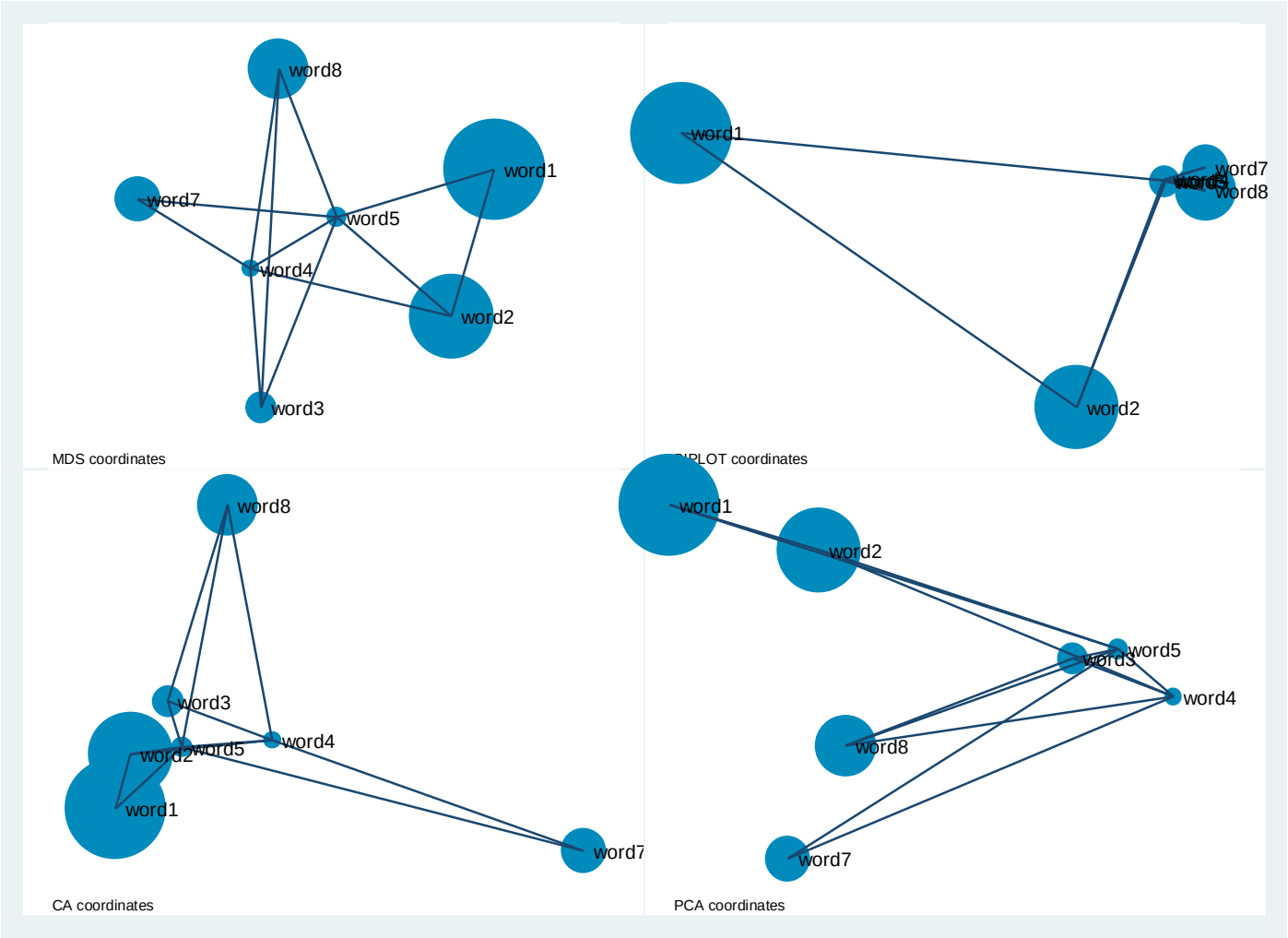
$$A[j,k] = 1 \Leftrightarrow [\mathrm{P}(r_{jk} \leq 0) < 0.5] \wedge j \neq k$$

CAN Output for Developing countries



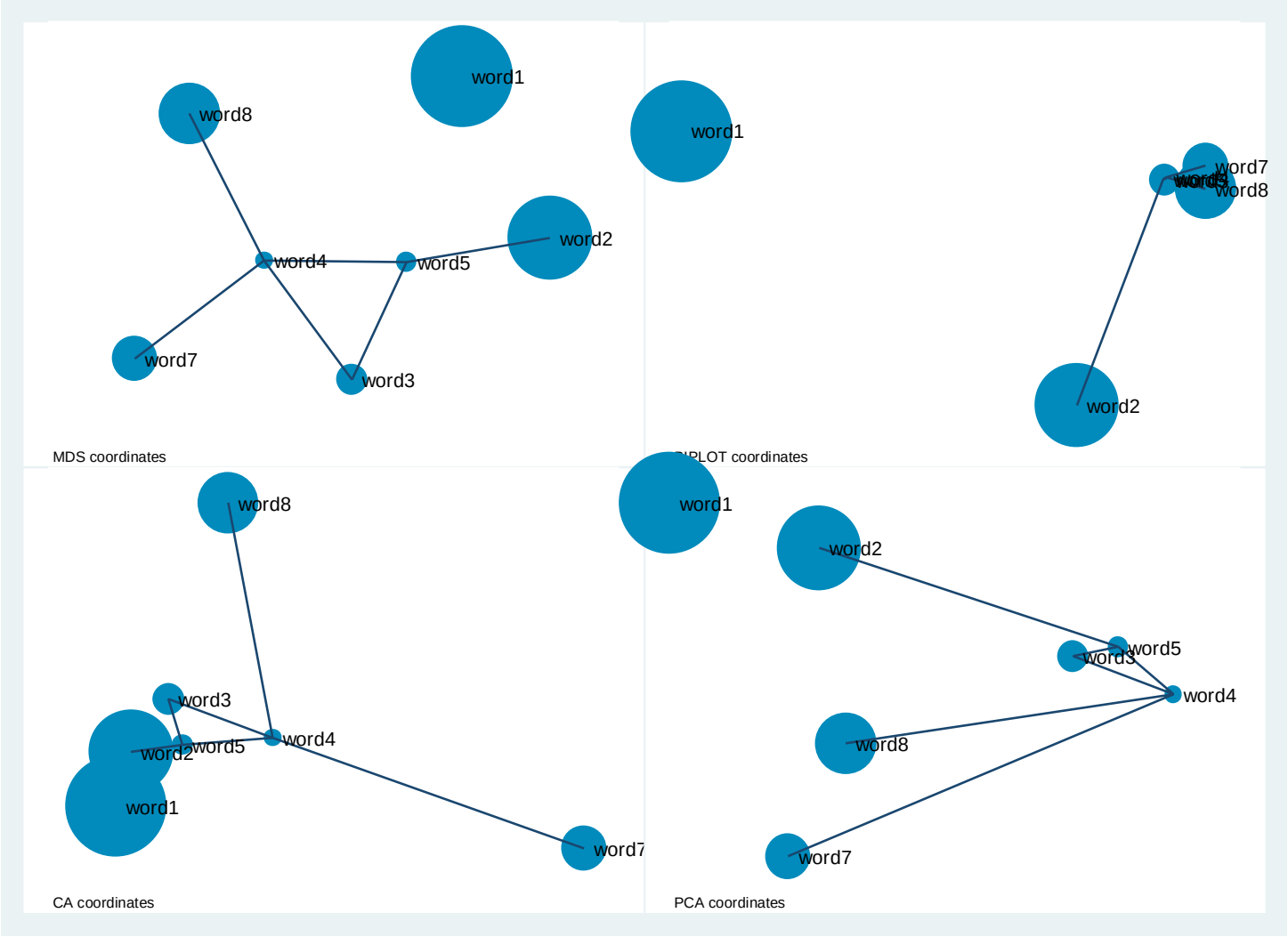
18 probable coincidences amongst 7 selected events. Density: 0.86

CAN Output for Developing countries



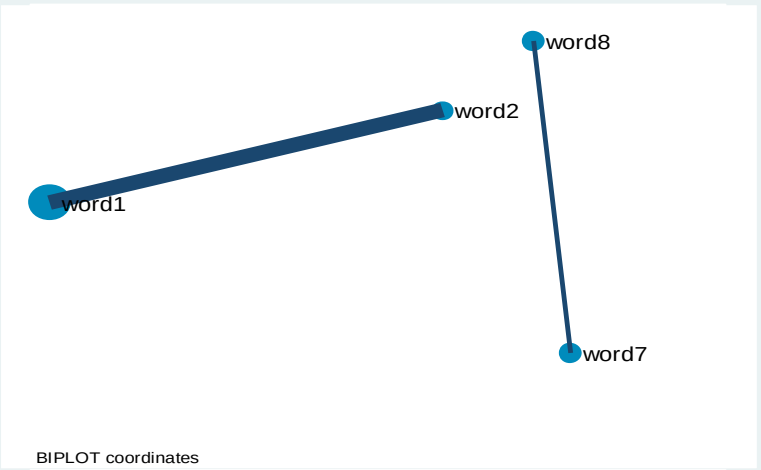
12 statistically probable(p<=.05) coincidences amongst 7 selected events. Density: 0.57

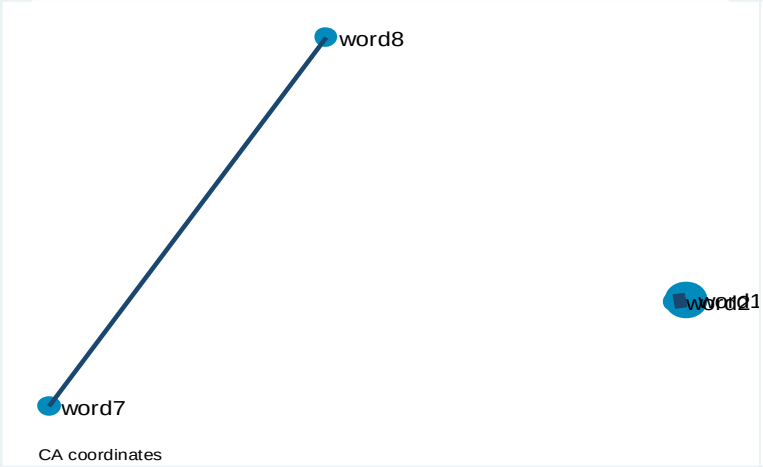
CAN Output for Developing countries

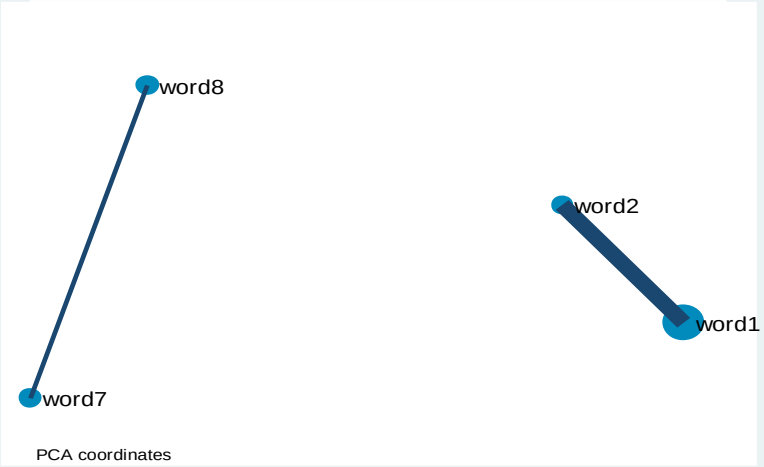


6 statistically probable(p<=.5) coincidences amongst 7 selected events. Density: 0.29

CAN Output for Developed countries







2 probable coincidences amongst 4 selected events. Density: 0.13，statistically probable(p<=.05)

CAN Output

- For developing countries, visitors have multiple purposes, mainly are economic purpose.

- But for developed countries, we do not have statistically significant output to prove the visitor have multiple purpose

Possible reason:

- Foreigners from developing countries, they need to reduce cost and increase benifit by reaching more than one purpose during their visit to China. But foreigners from developed countries, they do not need it.

Consequences at the individual level

	introduced or led your friends/relatives from your homeland to China		How many friends/relatives did you introduced or led from your homeland to China	
	logit model 1	logit model 2	poisson model 3	poisson model 4
male=1	0.191	0.161	0.423***	0.374***
countries type(developed=1)	-0.290*	-0.336**	-0.701***	-0.690***
education level	-0.0146	0.0138	0.0936***	0.0972***
age	-0.0231***	-0.0246***	0.0152***	0.0129***
first come year	-0.0879***	-0.0833***	-0.0645***	-0.0687***
To do business on yourown		0.317**		0.237***
To work for a multinational corporation		0.123		0.114***
To explore business opportunities		0.0394		-0.123***
To work for a homeland company		-0.349		-0.270**
To work for a Chinese company		0.0309		-0.147***
Follow family members or visit relatives		0.217		0.0087
Exchange student orresearch as visiting scholar		0.0575		-0.0281***
To travel as a tourist		0.288***		0.0531***
Constant	177.6***	168.1***	130.6***	138.9***
Observations	987	987	538	538

Consequences at the national level(developed countries)

	To do business on your own	To work for a multinational corporation	To explore business opportunities	To work for a homeland company	Follow family members or visit relatives	Exchange student orresearch as visiting scholar	To travelasatourist
first come year	0. 0413**	−0. 0128	−0. 00196	0. 00473*	−0. 00159	−0. 0149	0. 0115
To work for a multinational corporation	−0. 174		0. 0443	0. 0226	−0. 0258	−0. 256**	−0. 0336
To explore business opportunities	2. 502***	0. 481*		0. 300***	0. 136	−0. 287	0. 185
To work for a homeland company	−1. 086	0. 193	0. 413***		0. 415***	0. 697*	−0. 292
Follow family members or visit relatives	0. 75	−0. 138	0. 0847	0. 185***		−0. 323	−0. 2
Exchange student orresearch as visiting scholar	−0. 0646	−0. 155**	−0. 019	0. 0335*	−0. 0347		0. 119
To travel as a tourist	0. 239	−0. 0297	0. 0177	−0. 0203	−0. 0297	0. 172	
To do business on your own		−0. 0147	0. 0509***	−0. 0143	0. 0186	−0. 00131	0. 0602
Constant	−82. 25**	26	3. 891	−9. 502*	3. 227	30. 18	−22. 88
Observations	117	117	117	117	117	117	117
Number of groups	26	26	26	26	26	26	26

Consequences at the national level(developing countries)

	To do business on your own	To work for a multinational corporation	To explore business opportunities	To work for a homeland company	To work for a Chinese company	Follow family members or visit relatives	Exchange student orresearch as visiting scholar	To travel as a tourist
first come year	0. 00406	−0. 00821	0. 000496	−0. 00183	0. 00132	0. 000162	−0. 000229	0. 0162***
To work for a multinational corporation	0. 411***		0. 0138	−0. 00841	0. 0155	−0. 00486	−0. 0772**	0. 0954***
To explore business opportunities	0. 204	0. 0628		0. 0632***	0. 0456*	−0. 00386	−0. 102	0. 160*
To work for a homeland company	−0. 0307	−0. 19	0. 275***		0. 135**	−0. 000764	0. 0851	−0. 0249
To work for a Chinese company	0. 361	0. 27	0. 156*	0. 101**		−0. 000942	0. 239	−0. 0708
Follow family members or visit relatives	0. 483	−0. 725	−0. 0977	−0. 00461	−0. 00235		−0. 313	0. 886**
Exchange student orresearch as visiting scholar	0. 307***	−0. 144**	−0. 0509*	0. 0145	0. 0233	−0. 0046		0. 145***
To travel as a tourist	0. 13*	0. 174***	0. 0547*	0. 00283	0. 00722	0. 0115**	0. 135***	
To do business on your own		0. 254***	0. 0289*	0. 000285	0. 0114	0. 00228	0. 0963***	0. 0351
Constant	−7. 806	16. 72	−0. 983	3. 697	−2. 65	−0. 324	0. 54	−32. 57***
Observations	404	404	404	404	404	404	404	404
Number of groups	92	92	92	92	92	92	92	92

National level Output

- We observed that non-economic purpose visit do have cumulative causation influence power for developing countries;

- Non-economic purpose visiting to China increased the number of other economic purposes population growth, and those economic purposes population growth increase Non-economic purpose population growth. This loops constitutes Cumulative Causation.

Conclution

- Compare to developed countries, developing countries' low economic level incentives their citizens come to China with multi-purpose .
- Multiple purpose help developing countries' citizens embedded in transnational immigration networks between China and their homeland, which triggered the cumulative causation effect.
- Cumulative causation effect not only exist in economic purpose visiting, but also exist in non-economic purpose visiting, the two kinds of visitors interact to further increase.

Conclution

- Eventually, developing countries' multiple purpose will cause China to strengthen its relations with developing countries more than with developed countries.

- More international immigrants from developing country will gathered in the Metropolitan City of China, but less international immigrants from developed country.

Thanks!

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