Asian Community and a Tri-Polar Global Economic Governance

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Outline:

- ❑ "U.S.-China trade disputes and the long run grwoths"

- ❑ "G3" — Facts in structural changes in globalization

- ❑ **Optimal global economic governance, a theoretical framework**
  - ➢ We classify international public goods into two types: Global Public Goods and Regional Public Goods.
  - ➢ If there is no administration efficiency gain, all public goods should be provided by the regional blocs. As regional blocs' administration cost increases, or the global government's administration cost decreases, more public goods should be provided by the global government. Regional governance and the global governance are complementing, which we label as "complementarity principle", in the sense that as the number of regional blocs increases, more public goods should be provided by the global government.

中国经济增长路径

假设：2018年以后中国GDP年平均增速为4.7%，美国GDP年平均增速为3%

中国经济增长路径1（没有中美贸易争端的正常路径）：中国GDP将于2025年左右赶上美国，并在2060年达到美国GDP的2.5倍左右。
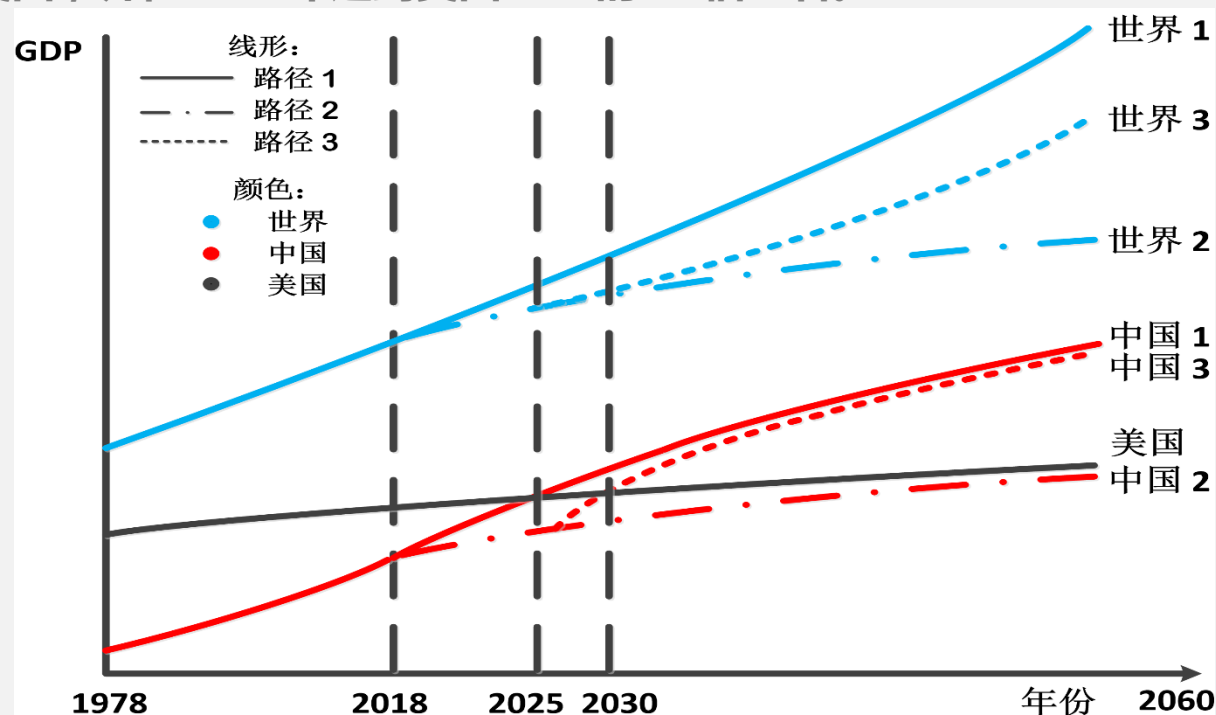
Since 2012, the growth rate of global trade volume has shown a significant slowdown trend.

➢ The growth rate of global commodity trade (measured on export side) has been declining for 5 consecutive years, and has been below 3% for 4 consecutive years since 2013.

➢ The global trade has shown a negative growth up to 13.6% in 2015. The severity of the decline in trade is almost equal to the global financial crisis in 2009.

The decline in global trade: cyclical phenomenon or new normal?
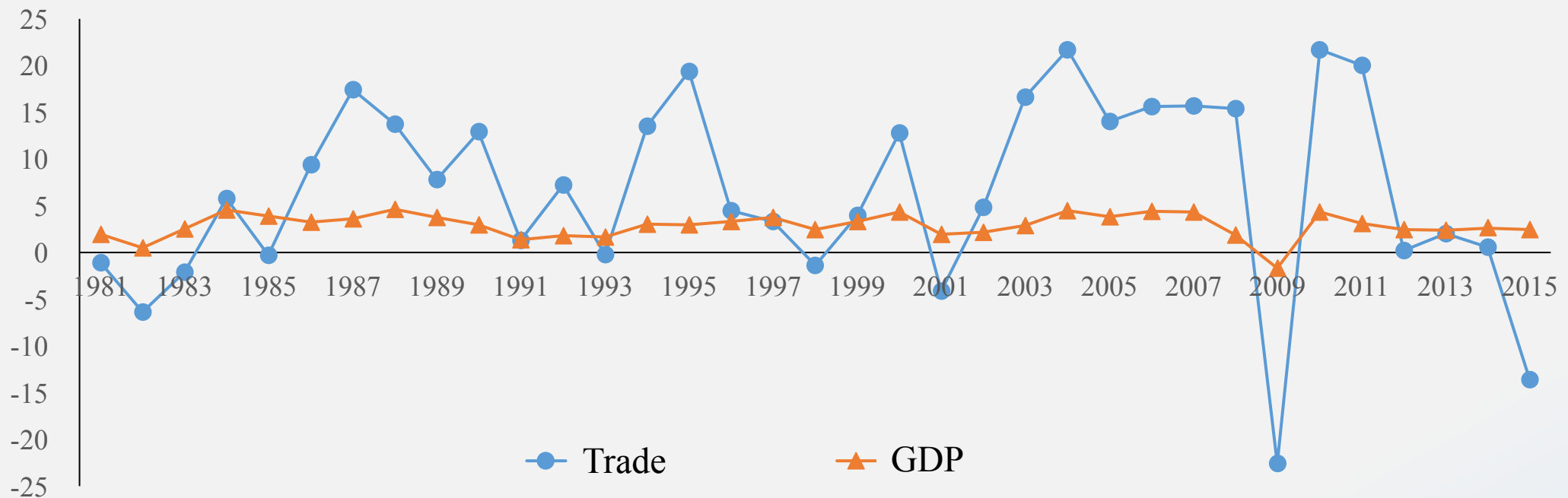
Old normal — "Rapid growth, US-dominated, and China-driven"

↓ **2012**

New normal — "Slowdown in growth, Tri-polar world order, and Block-structured"

"North American Value Chain, European Value Chain and Asian value chain" — a new Tri-polar World Order has formed"

➤ The normal and structural changes in global trade reflect the development of the global economy and the evolving pattern of global governance.

Old normal — "Rapid growth, US-dominated, and China-driven"

☐ **US-dominated：**

Before 2012, the US is the world's largest commodity trading country.

➤In 2000, the US accounted for 15.48% in the total global trade, which is more than the sum of Germany (7.96%) and Japan (6.51%).

➤The US was the largest trade partner for the most number of countries, played a lce role in the global economy.

☐ **China-driven：**

The rapid growth of Global trade before 2012 was due to four key factors:

➤Low-cost labor in developing countries enter into the world production system;

➤A sharp drop in the trade cost brought by technical progress in container shipping and transportation technology;

➤The reduction of trade costs;

➤The rapid growth of trade in intermediate goods promoted by the vertical division of production in the world.

All these factors were reflected in China: China was the driving force of world economic growth in this period

New normal — "Slowdown in growth, Tri-polar world order, and Block-structured"

Since 2013, China has overtaken the U.S. to become the world's largest trading country in goods.

The block-structured global trade framework driven by regional economic integration has gradully been strengthened.

☐ **The old global trade system, "US-dominated", is replaced by a tri-polar value chain system — North American Value Chain, European Value Chain, and Asian value chain, which respectively considers the US, Germany and China as the core.**

The trend mentioned-above is clearly visible if we compare the trade interdependence network for 1995 and 2014.
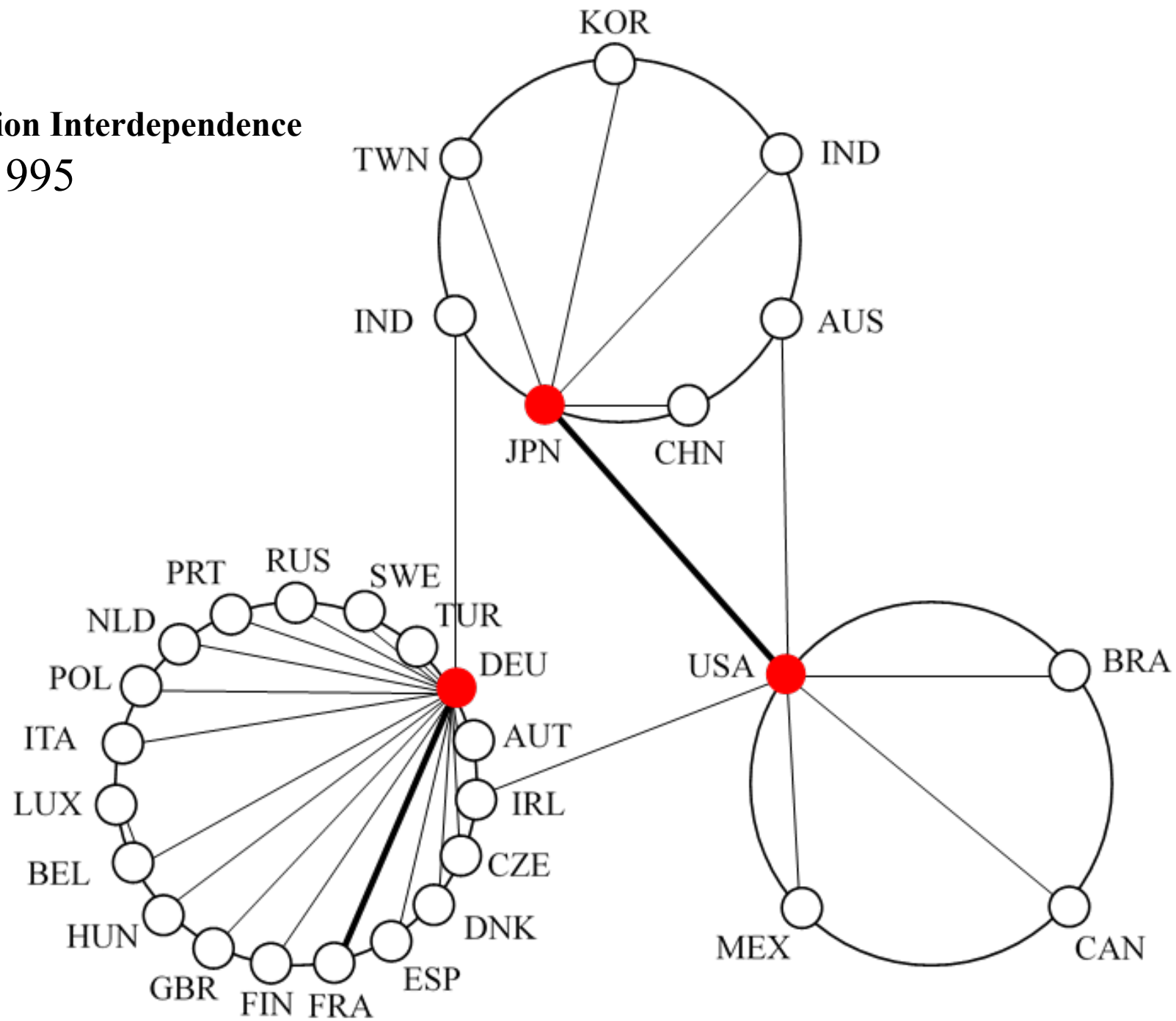
Network of Trade Interdependence
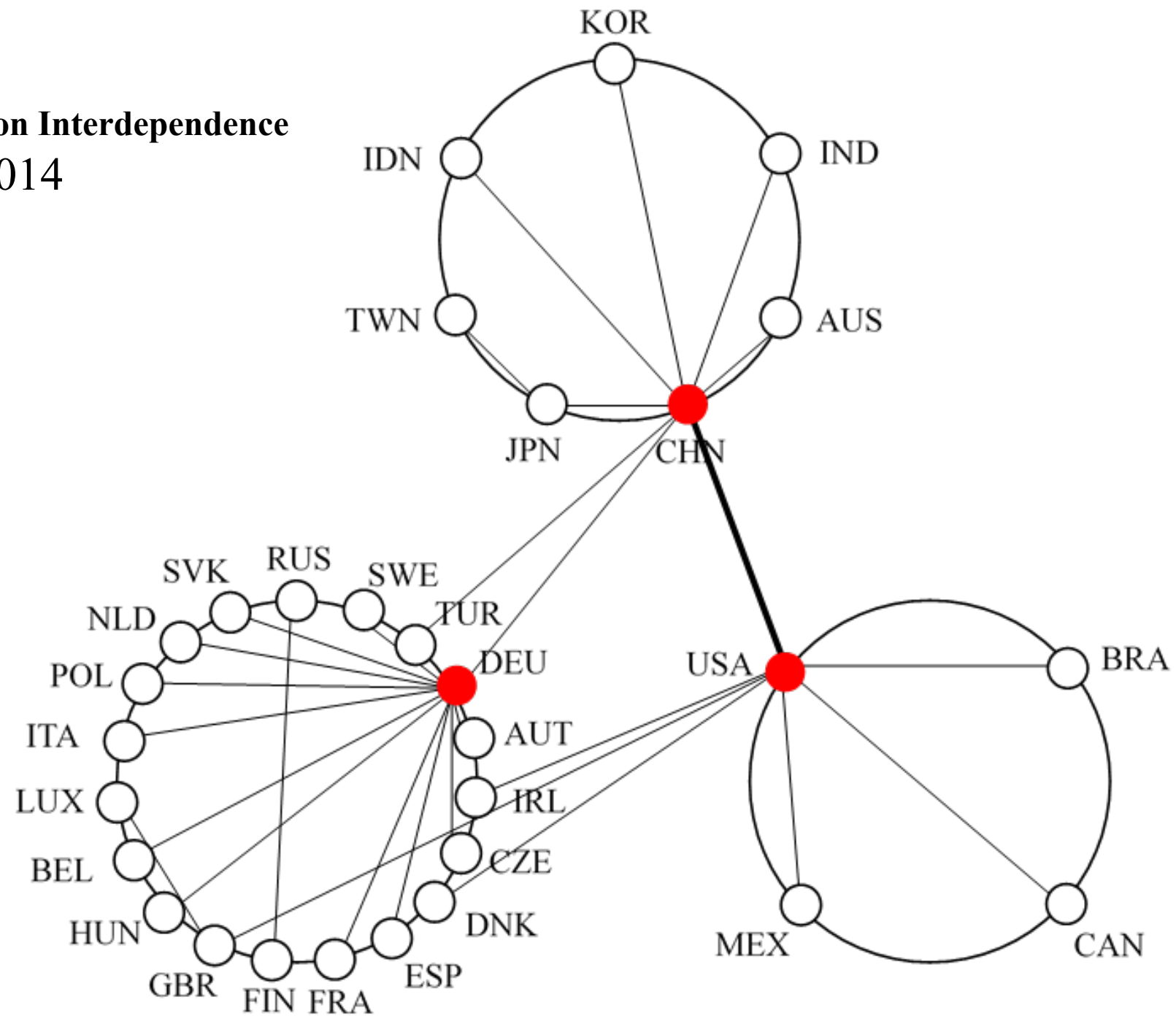Year 1995
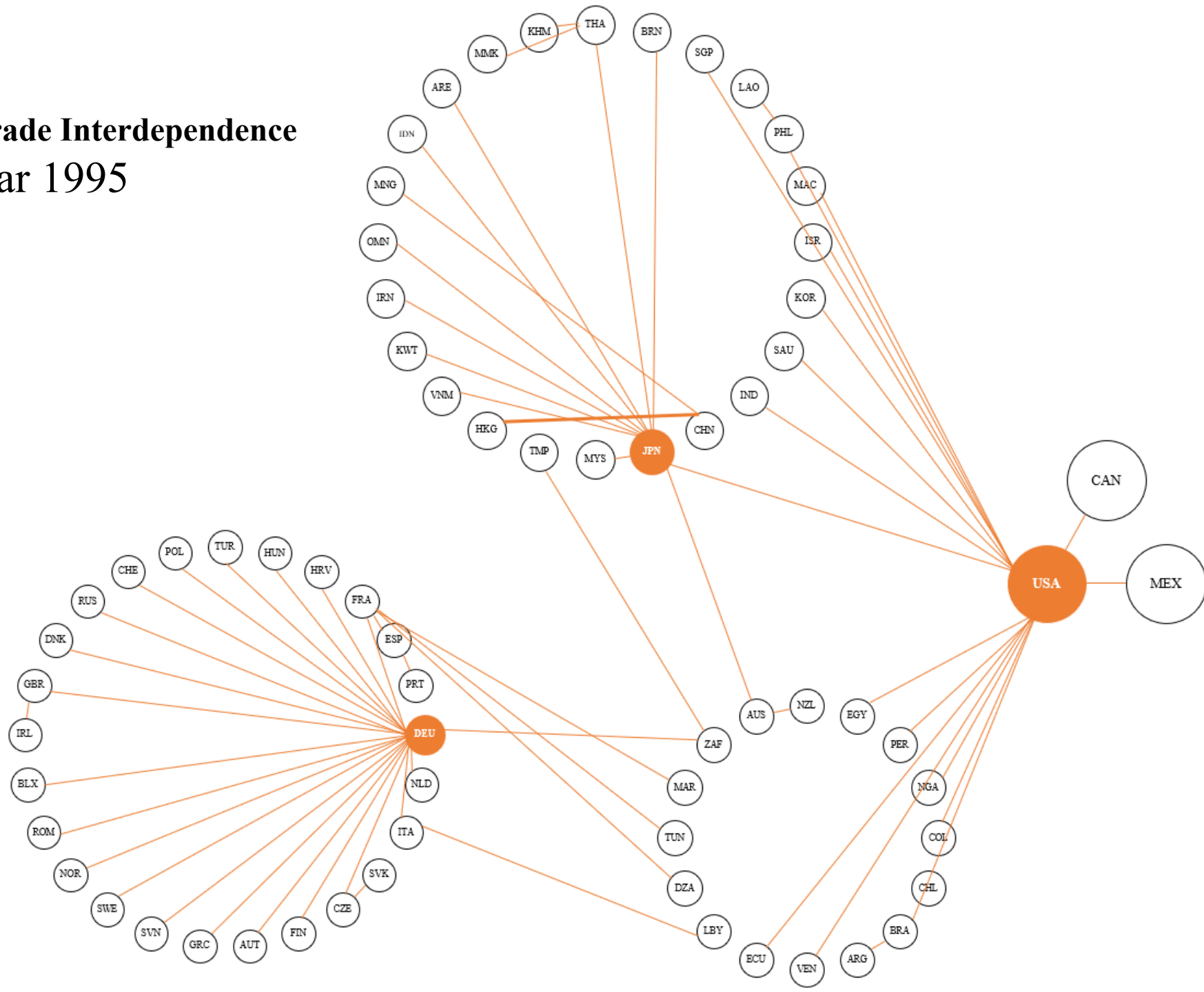
Network of Trade Interdependence
Year 2015
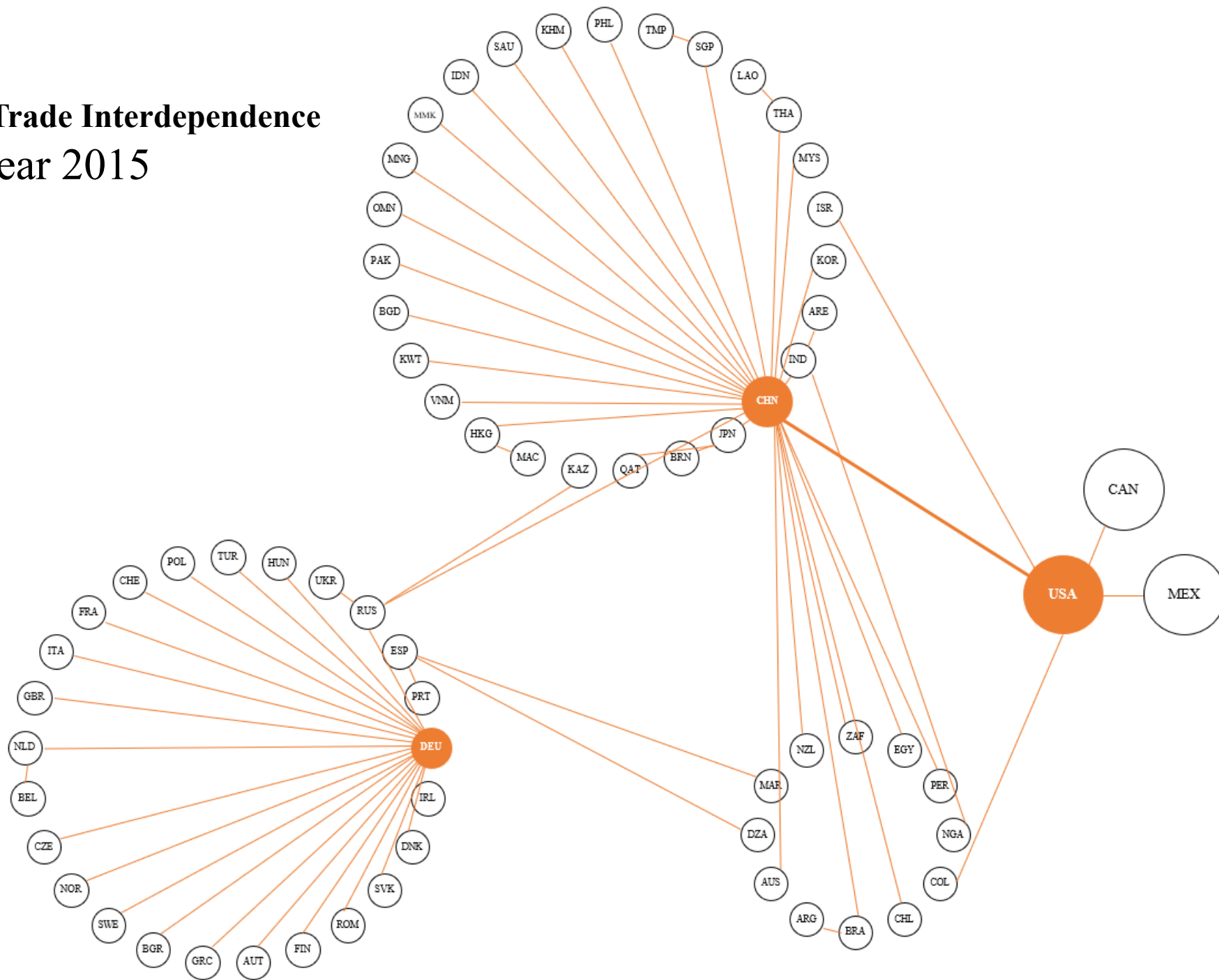
Network of Production Interdependence

Year 1995

Network of Production Interdependence
Year 2014

Whether there is a feasible solution for these four core questions？

—— from G2 to G1 to G3: a new framework for global economic governance

G2：US-Soviet confrontation

G1：American-dominated

G3：Tri-polar world order

- North America: the US, Canada and Mexico have formed an integral production and trade network since the NAFTA took effect in 1994
- **Europe：t**he Europe Union was formed in 1993, 28 member economies in 2015

Region	Leading Deep FTA	Key Features
North America	NAFTA	• Tariff Elimination on most products among member countries • No restriction on imports or exports between member countries
Europe	EU	• Customs Union • Common Market • Monetary Union • Political Union
East Asia	Non-existent	

Therefore, we propose to establish a FTA among Asian economies and with China as the "Hub" country. We call this deep FTA "Asian Community."

Which Asian economies are most likely to establish an FTA?

Following Baier and Bergstrand (2003), we use Probit or Logit regression models to estimate the partial effects of changes in different factors, such as country size, distance and culture, on the probability of establishing a RTA (Regional Trade Agreement):

$$\text{Probability}(RTA_{ijt} = 1)$$
$$= \emptyset(\beta_0 + \beta_1 \ln(GDP_{it}) + \beta_2 \ln(GDP_{jt}) + \beta_3 \ln(Distance_{ij}) + \theta X_{ij} + \varepsilon_{ijt})$$

- **RTA:** indicator variable, which takes the value 1 if two countries (*i* and *j*) have a regional trade agreement at year *t*. It covers all regional trade agreements among 225 economies made available on the WTO website over the period 1948 to 2015;

- **GDP$_{it}$ and GDP$_{jt}$:** Nominal GDP, the World Bank's World Development Indicators (WDI);

- **$Distance_{ij}$:** Bilateral distance, CEPII GeoDist database;

- **X_{ij}:** other control variables, including common language, religion and currency.

LHS=Prob(RTA=1)	Logit (1)	Probit (2)
lnGDPi	0.284***	0.136***
	(0.00268)	(0.00132)
lnGDPj	0.287***	0.138***
	(0.00268)	(0.00131)
lnDis	-1.556***	-0.781***
	(0.00736)	(0.00380)
Language	0.436***	0.213***
	(0.0167)	(0.00812)
relig	0.356***	0.247***
	(0.0218)	(0.0108)
currency	1.205***	0.628***
	(0.0288)	(0.0153)
Constant	-3.758***	-1.699***
	(0.0987)	(0.0485)
Observations	808,398	808,398

Then, based on the regression results in column 1 (logit model), we estimate the predicted probability of establishing a RTA at year 2015 between country i and j.

Top 20 economies with the highest probability to establish a RTA with China, 2015

	Economy	Region	Probability to establish a RTA with China
1	KOR	Asia	85.5%
2	TWN	Asia	82.5%
3	HKG	Asia	78.2%
4	JPN	Asia	78.2%
5	MAC	Asia	60.8%
6	PHL	Asia	52.4%
7	THA	Asia	48.8%
8	VNM	Asia	48.7%
9	MYS	Asia	48.1%
10	IND	Asia	47.8%
11	SGP	Asia	45.8%
12	BGD	Asia	45.1%
13	MNG	Asia	44.6%
14	MMR	Asia	37.9%
15	IDN	Asia	37.3%
16	RUS	Europe	34.6%
17	KAZ	Asia	32.7%
18	LAO	Asia	32.5%
19	PAK	Asia	32.4%
20	KHM	Asia	28.3%

We connect Asian economies in the list with top 2 economies that have the highest probability to establish a Regional Trade Agreement.
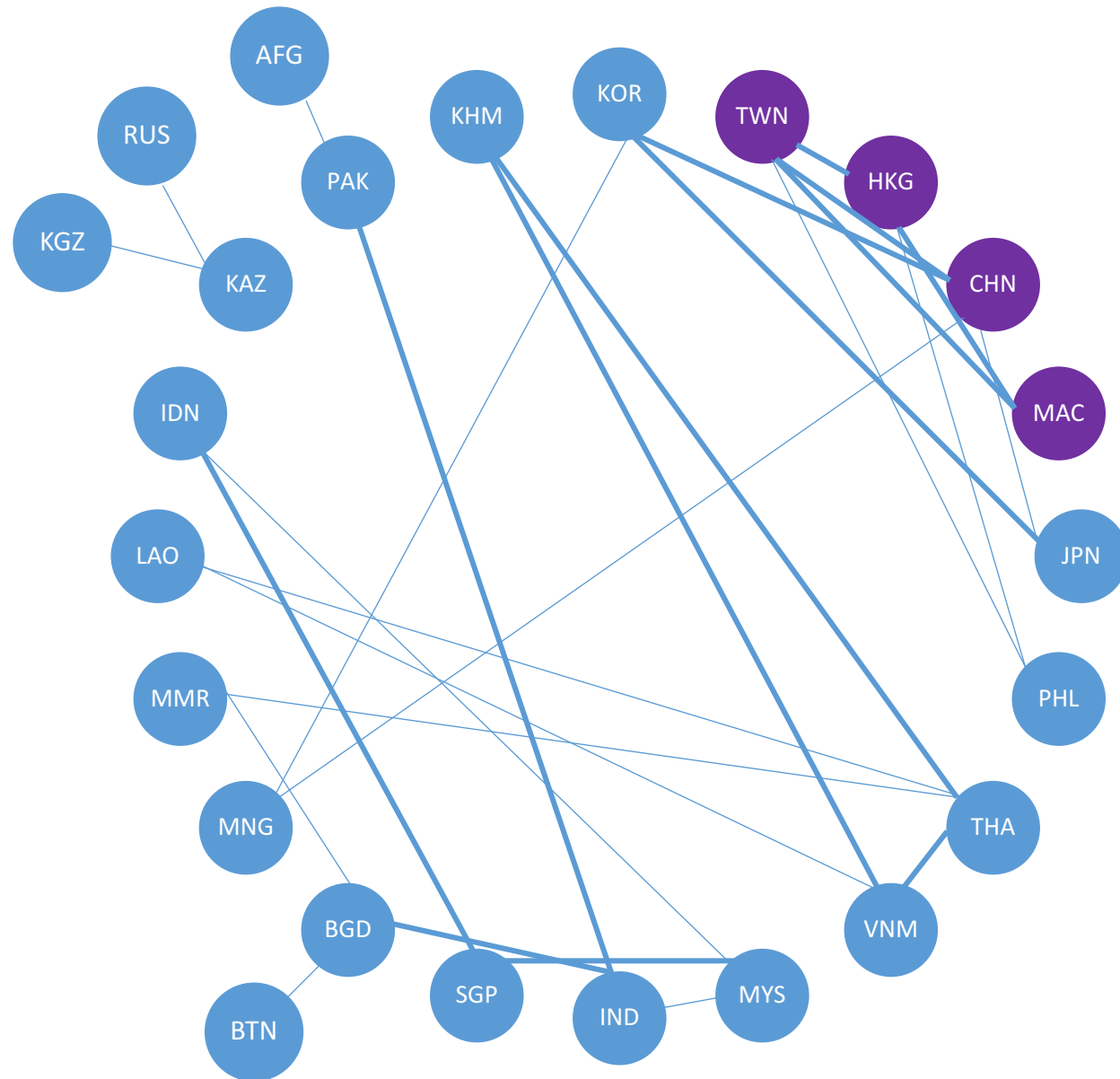
Theoretical Framework

☐ **Alesina and Spolaore (1997, 2003):**

  ➢ Heterogeneous preferences for the type of a common public good
  ➢ Heterogeneity of preference in a population represents a cost of country size

—— **It is harder to satisfy the diverse preference of individuals for the common public good when a nation becomes larger.**

Global Governance: Provisions of public goods beyond national boundaries.

Two types of "public goods":

  ➢ **Global public services:** Only one variety of the good should be provided to the entire world

  ➢ **Regional public services:** The preferences of nations are relatively heterogeneous, and regional organization (blocs) would instead provide these public goods

■ **We consider the problem of forming national blocs among the continuum of nations alongside the global organization.**

Model Setup
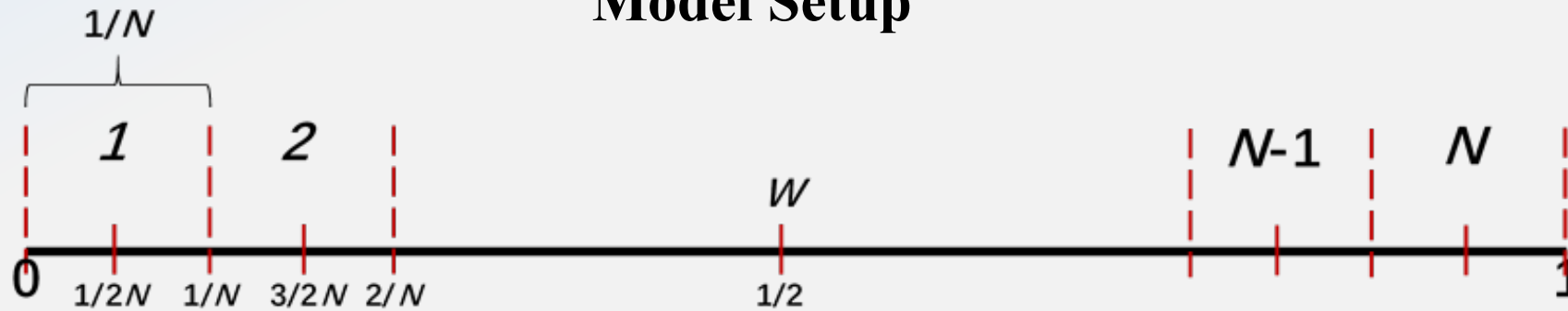
☐ A continuum of nations with heterogeneous preference。

➤ Distributed uniformly on the segment [0, 1].

☐ The distance between any two points on the segment represents the differences between the two varieties of the public good.

☐ When a public good locates at a point different from a nation's location, there will be disutility resulting from preference differences.

Two dimensions of "disutility":
➤ How strong is a nation dislikes the preference differences, a ~ N(0,1)
➤ How large is the preference differences

☐ For simplicity, a public good is denoted by "a". Let (a) be the preference distance from nation i to the public good.

The preference of nation i:

$$V_i(a) = \int_{a \in A} g(1 - al_i(a))da + y - t_i \qquad (1)$$

Social Planner:

- Social planner can choose the number of national blocs N.

  - Each bolc providing a set of regional public goods $a \in A^r$, along an global-level organization providing a set of global public goods $a \in A^g$

- The cost of each regional government or global organization is $K \int_{a \in A^r}^r da$ and $C \int_{a \in A^g}^r da$

The social planner's problem is to maximize the social welfare function:

$$\max W = \int_0^1 V_i \, d_i \qquad (2)$$

$$s.t \quad \int_0^1 t_i \, d_i = NK \int_{a \in A^r} da + C \int_{a \in A^g} da \qquad (3)$$

The social planner chooses the optimal structure for global governance in two steps.

➢ First, the social planner chooses the optimal number of regional blocs N*.

➢ Second, given N*, for each public good, the social planner decides whether the global organization or the regional blocs should provide the public good.

Substituting Equation (1) into Equation (2), we have:

$$\max W = \int_0^1 \left(\int_{a \in A} g(1 - al(a)_i) \, da + y - t_i \right) d_i$$

$$s.t \quad \int_0^1 t_i \, d_i = NK \int_{a \in A^r} da + C \int_{a \in A^g} da$$

The social planner's problem be simplified to:

$$\max W = \int_{a \in A^g} [\int_0^1 g(1 - al_i(a))d_i - c]da + \int_{a \in A^r} [\int_0^1 g(1 - al_i(a))d_i - NK]da + y$$
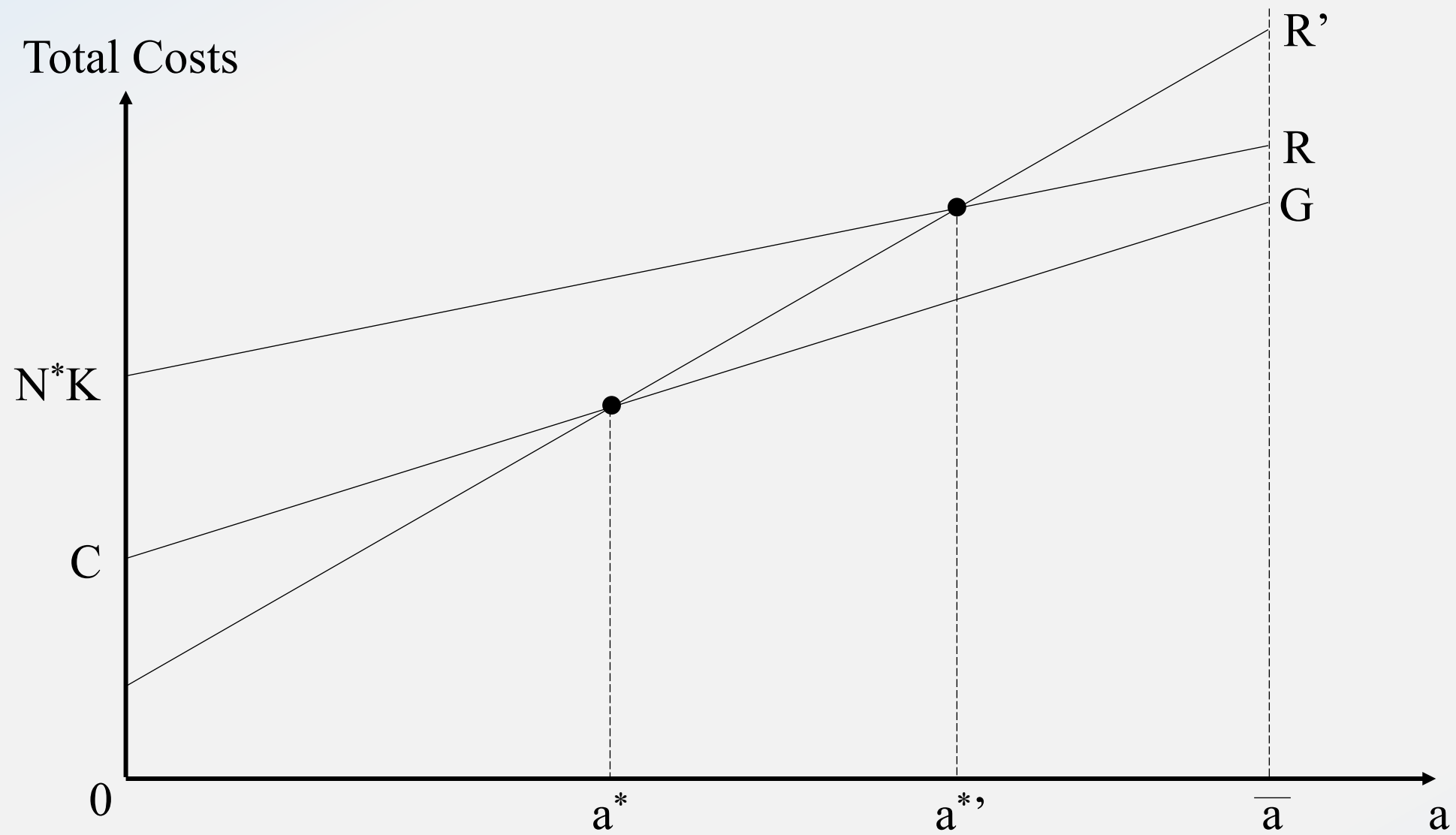
Note that

$$\left[\begin{array}{l} \int_0^1 g(1 - al_i(a))d_i = g - \dfrac{ga}{4} \quad \text{for} \ a \in A^g \\[4mm] \int_0^1 g(1 - al_i(a))d_i = g - \dfrac{ga}{4N} \quad \text{for} \ a \in A^r \end{array} \right.$$

Thus we have

$$W = \int_{a \in A^g} [g - \frac{ga}{4} - C]da + \int_{a \in A^r} [g - \frac{ga}{4N} - NK]da + y \qquad (4)$$

Public good is provided by the regional blocs if and only if

$$\frac{ga}{4} + C \geq \frac{ga}{4N} + NK \qquad (5)$$

Total Costs

R'

R

G

N*K

C

0   a*   a*' $\overline{a}$ a

$$a^* = \frac{4N^*(N^*K-C)}{g(N^*-1)}. \quad (6)$$

Proposition 1: *If there is no administration efficiency gain, all public goods should be provided by the regional blocs. As regional blocs' administration cost increases, or the global government's administration cost decreases, more public goods should be provided by the global government. Regional governance and the global governance are complement, which we label as "complementarity principle", in the sense that as the number of regional blocs increases, more public goods should be provided by the global government.*

Integrating over *a* and rewriting (4):

$$\max \ W = \frac{1}{8}\frac{g}{\bar{a}}a^{*2}\left(\frac{1}{N}-1\right)-\frac{1}{8}\frac{g\bar{a}}{N}-NK+\frac{NK-c}{\bar{a}}a^{*}+g+y.$$

Optimal number of regional blocs N*:

$$-\frac{g}{8\bar{a}N^{*2}}\left(\frac{4N^{*}(N^{*}K-c)}{g(N^{*}-1)}\right)^{2}+\frac{g\bar{a}}{8N^{*2}}-K+\frac{K}{\bar{a}}\left(\frac{4N^{*}(N^{*}K-c)}{g(N^{*}-1)}\right)=0 \qquad (7)$$

For $\bar{a}g+4c>4\sqrt{\bar{a}gk}$:

$$N^{*}=\frac{\sqrt{(\bar{a}g\ +4c)^{2}-16\bar{a}gK}+\bar{a}g+4c}{8K} \qquad (8)$$

where $\bar{a}g\sqrt{(\bar{a}g\ +4c)^{2}-16\bar{a}gK}+\bar{a}^{2}g^{2}+4\bar{a}cg-8\bar{a}gK\neq0$

$$\frac{\partial N^*}{\partial c} > 0, \frac{\partial N^*}{\partial K} < 0$$

☐ The optimal number of regional blocs is increasing in the administration cost of public good by the global organization and decreasing in the administration cost by the regional blocs.

For $k < \frac{1}{8}\bar{a}g + \frac{1}{2}c,$ $\quad \frac{\partial N^*}{\partial g} > 0, \frac{\partial N^*}{\partial \bar{a}} < 0$

☐ If the administration cost of public goods by regional blocs is small enough, a stronger preference for the ideal variety of a public good, or a longer continuum of public goods, calls for a greater number of regional blocs so that each nation can enjoy public goods closer to their ideal type.

Types of international public goods

1. Global Public Goods

Only one variety of the good should be provided to the entire continuum of nations.

➢ Small g: Preference for some public goods may be relatively homogeneous

➢ Large k: Extremely costly to provide a new variety of the public good (k is very large

2. Regional Public Goods

Type 1: Geographic

➢ The preferences of nations are relatively heterogeneous;

➢ Deviation for the ideal variety imposes a high cost on a nation;

➢ The provision of an additional variety of the public good is not so costly

The optimal arrangement of nations into blocs is fully driven by distribution of preference for the public good among nations.

➢ Empirically, the distribution of preferences may be highly correlated with geographic locations.
——— Production network linkages are strongest within regions rather than across regions

2. Regional Public Goods

Type 2: Non-Geographic

The preference for the variety of some public goods may be based on factors other than geographic locations.

➢ Developing nations may share similar preferences about how the global macro economy should be managed.

➢ The resource-rich nations may share similar preference on the regulation of the commodity markets (Consider OPEC).

- **The regional organizations can be instrumental in implementing the global public good.**

- When there are many international public goods, we conjecture that the "national blocs" may be consolidated to provide several public goods at the same time, if the distribution of preference among nations is similar across some international public goods.

- Regional organizations such as NAFTA, EU and the proposed Asian Community are especially appealing solutions,

- Regional organizations should play an important role in the provision of global public goods. Even though the optimal variety is 1 ($N^*=1$), the preference for the variety may be still very heterogeneous

Four factors that influence the success of the global economic governance framework

—— G3: an effective governance framework, or not?

☐ The global economic governance system is a form of governance without the world government, so it depends on the economic cooperation among sovereign governments of all countries, international organizations, non-governmental organizations, social groups and individuals on the basis of common consensus.

☐ Four factors that influence the success of the global economic governance framework：
- ➢Representativeness
- ➢Efficiency
- ➢Cooperation instead of confrontation
- ➢Pluralism and non-hegemony

1. Representativeness

	Asian Community（15）	EU（28）	NAFTA（3）	Total
Trade Share	33.4%	32.2%	16.4%	82%
GDP Share	26.9%	26.2%	23.8%	76.9%

Asian Community: China, Taiwain and Marco and Hongkong of PRC, Mongolia, Singapore, Vietnam, Korea, Japan, Philippines, Thailand, Malaysia, Indonesia, India, Bangladesh, Kazakhstan, Lao, Pakistan, Cambodia and Myanmar

European Union：France, Italy, Netherlands, Belgium, Luxembourg, Germany, Ireland, Denmark, United Kingdom, Greece, Portugal, Spain, Austria, Finland, Sweden, Poland, Latvia, Lithuania, Estonia, Hungary, Czech, Slovakia, Slovenia, Malta, Cyprus, Bulgaria, Romania, Croatia

NAFTA：United States, Canada, Mexico

2. Efficiency

➢ The likelihood of a successful negotiation is inversely proportional to the number of people attending the negotiation;

➢ G20 is the transitional stage

➢ G3, the tri-polar structure of governance, is more likely to remain stable than a system with "unipolar dominance" and "bipolar balance of power"

NAFTA, the EU and the Asian Community first reach internal consensus among member economies

⬇

On behalf of the three FTA, the US, Germany and China can meet and discuss on relevant issues to reach agreement with each other

⬇

Make joint efforts to get the policies implemented effectively.

3. Cooperation instead of confrontation

☐ The history of US-Soviet confrontation demonstrates that the bipolar global governance system is very likely to evolve into a power struggle between two strong countries;

☐ the G3 of America, Germany and China may be more closer to an optimal state of balanced power and economic efficiency, wihc can ensure the stability of the governance system in the long term, rather than confrontation.

  ➢ On the one hand, China's development stage is similar to many developing countries, which implies similar development demands;

  ➢ On the other hand, China is not always in line with the other developing countries in economic policies, on the contrary, is more closer to developed countries.

4. Pluralism and non-hegemony

☐ The world has entered into a new era that is driven by innovation and led by knowledge and human capital. Diversified culture is the soil of innovation. The healthy and friendly competition among countries will help promote the development of the world.

  ➢ The US is trying to get the leader position in global economic and trade through the TPP and TTIP, thus to regain its dominating status under the G1-G7 system;

  ➢ The G3 system we proposed encourages competition and pluralism.

☐ The tri-polor goverence system is stable. It will be very difficult to change this structure by any one part if the power of these three parts is similar to each other.

Not the G1 which the US attempts to restore, nor the G2 that implies American-Soviet confrontation, but the G3 — NAFTA (North American Free Trade Agreement), EU (European Union) and Asian Community, which adapts to the tri-polar structure of global economic, is the future direction of global economic governance.

The G3 governance framework is expected to facilitate coordination of policies and programs on a global scale

➢ NAFTA, EU and Asian Community contribute 23.8%, 26.2% and 14.5% respectively to global GDP, **64.5% in total in 2015**

➢ NAFTA, EU and Asian Community contribute 16.4%, 32.2% and 22.6% respectively to global trade volume, **71.2% in total in 2015**