



Trade Linkages of BRICs In the World Economy

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Motivation

New Story

“We will steadily develop foreign trade. This year(2010) the main focus is on **opening new markets** and **adjusting the structure** of and **promoting balance** in foreign trade.”
——the Report on the Work of the Government, on March 5, 2010

Old Story

“We will firmly follow the strategy of **market diversification, adjusting and improving the structure** of export and import.”
——the 9th Five-Year Plan for National Economic and Social Development, on March 5, 1996

Next Story?

Definition and Data

- **Definition**

- “**BRICs**”: Brazil, China, India, Russia
- “**G7+AUS**”: represents the **major developed countries**, refers to the 8 developed countries inside the G20 excluding EU. They are United States, Japan, Germany, Britain, France, Italy, Canada (G7) and Australia.
- “**E11**”: represents **emerging economies**, refers to the 11 developing countries inside the G20. They are Argentina, Brazil, China, India, Indonesia, South Korea, Mexico, Russia, Saudi Arabia, South Africa and Turkey.

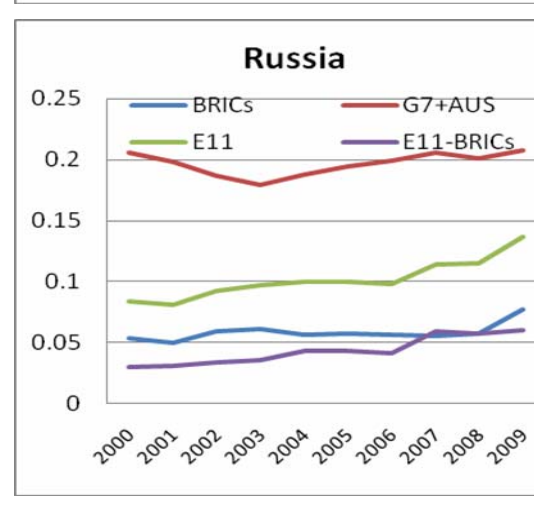
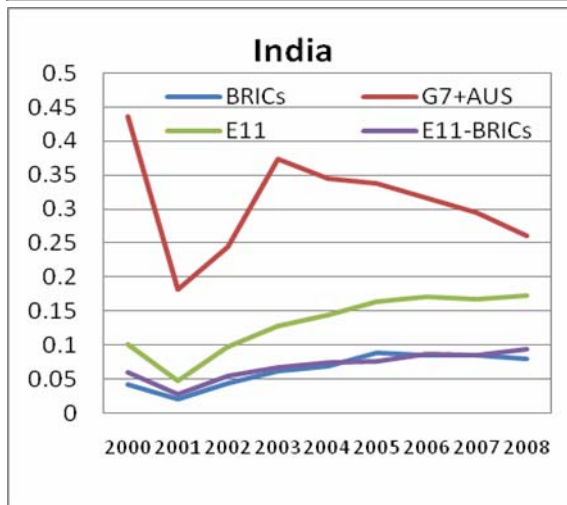
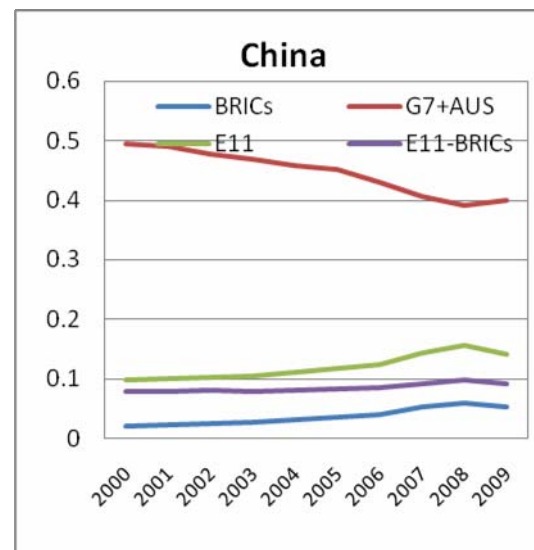
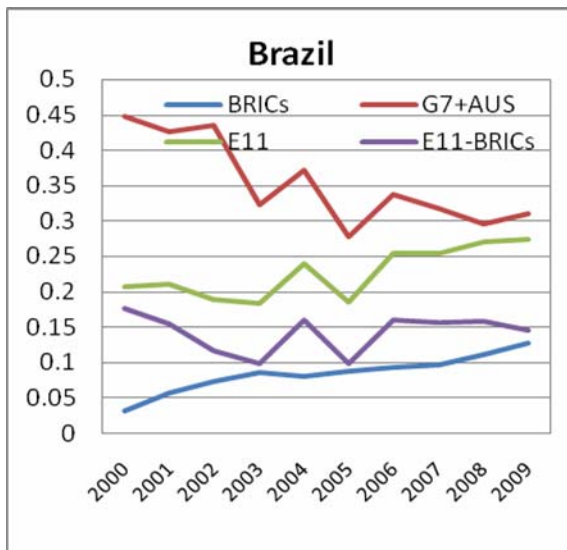
- **Data**

- **Source**: UNCOMTRADE, authors' calculation
- **Year**: In order to reflect the latest developments and unless otherwise stated, the individual country's trade figure we use in this article are from year of 2009. Due to data availability, India's sub-trade figures is from 2008 but its total trade value figures is still from 2009.



- **Part 1 Coupling or Decoupling**

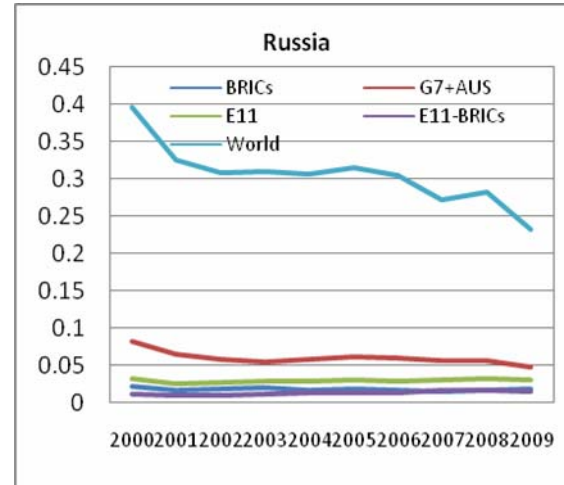
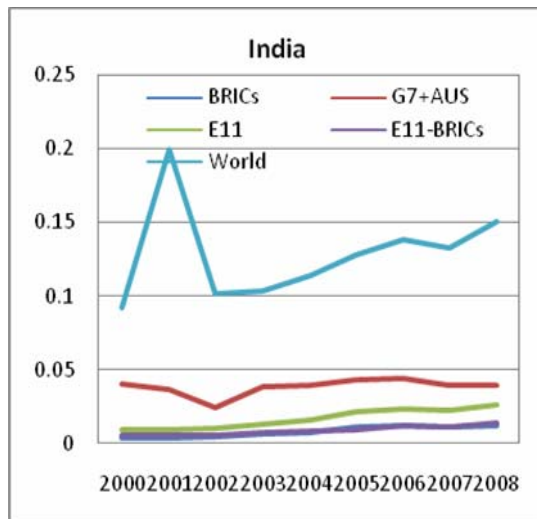
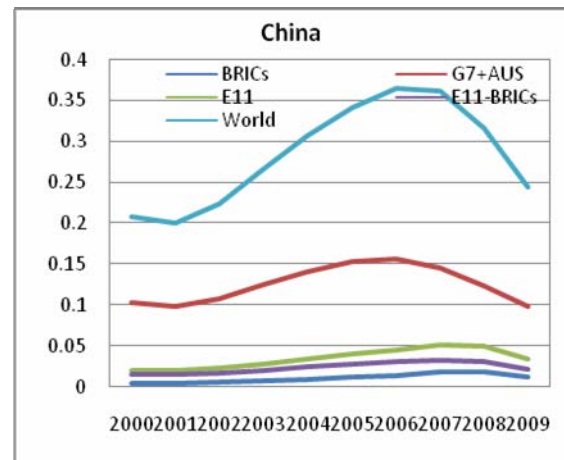
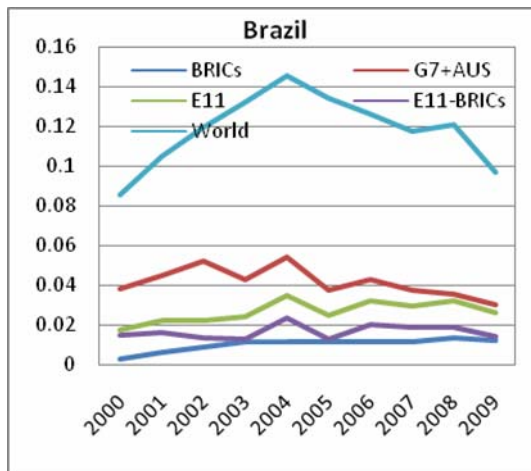
1.1 BRICs: Export/Total Export (2000-2009)



Facts 1.1: Exports share to “G7+AUS” have generally been in decline; while to emerging economies have increased significantly.

Facts 1.2: “G7+AUS” are still the most important exports markets of BRICs

1.2 BRICs: Export/GDP (2000-2009)



Facts 1.2: The importance of “G7+AUS” market as export destination is largely steady for Brazil, China and India, and it only dropped slightly for Russia..

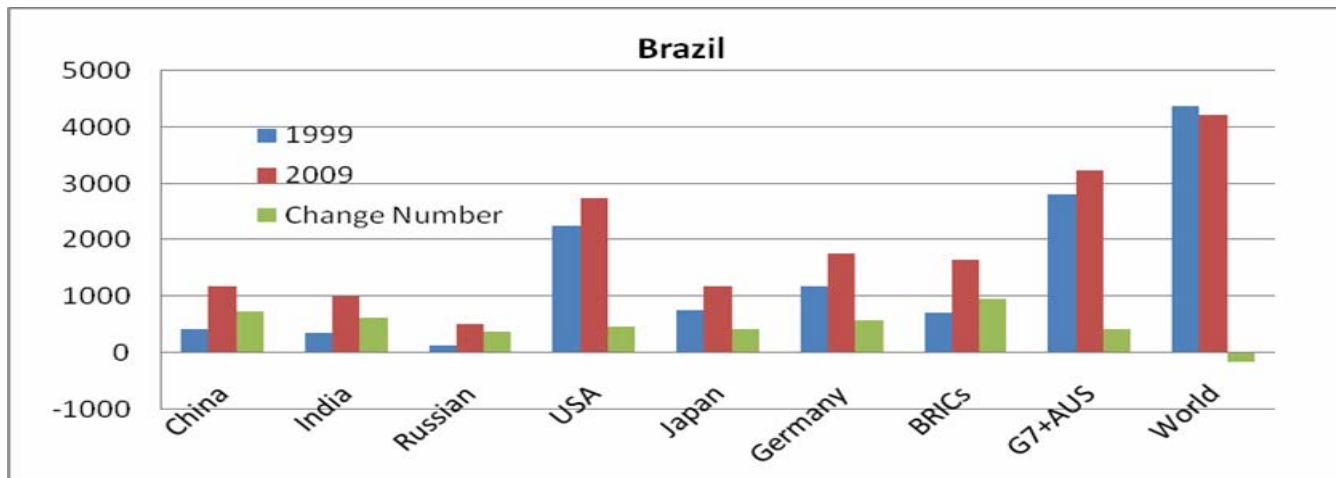
1.3 Two Possible Reasons to Underestimate the Importance of Developed Countries Market

- **Trade Pattern**
 - “G7+AUS”: product variety
 - “BRICs”: fragmentation of production
- **Two Amplifiers of Crisis**
 - International amplifier: slowing down the world economic growth rate
 - Domestic amplifier: affect consumption and investment in BRICs through trade

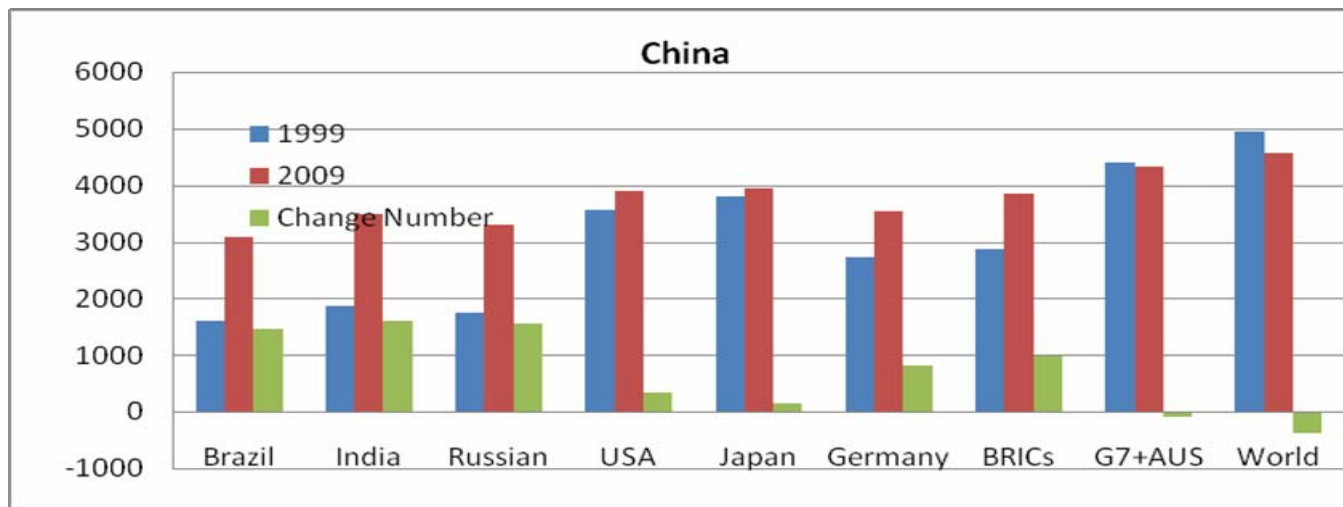


- **Part 2 Export Diversification**

2.1 (A) BRICs: Export Diversification (1999-2009)

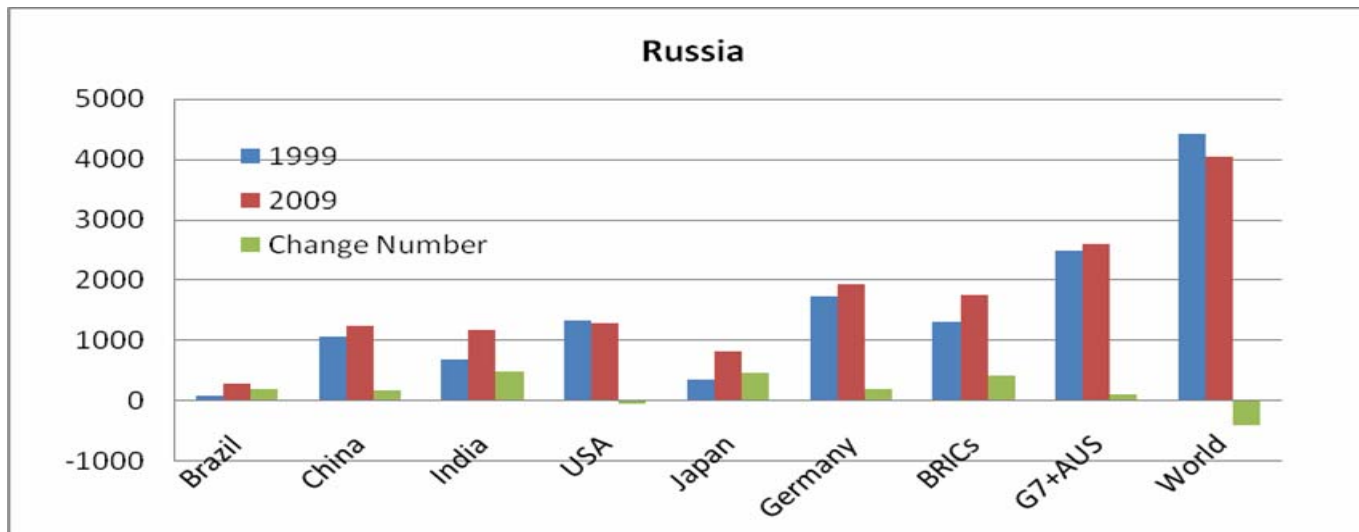
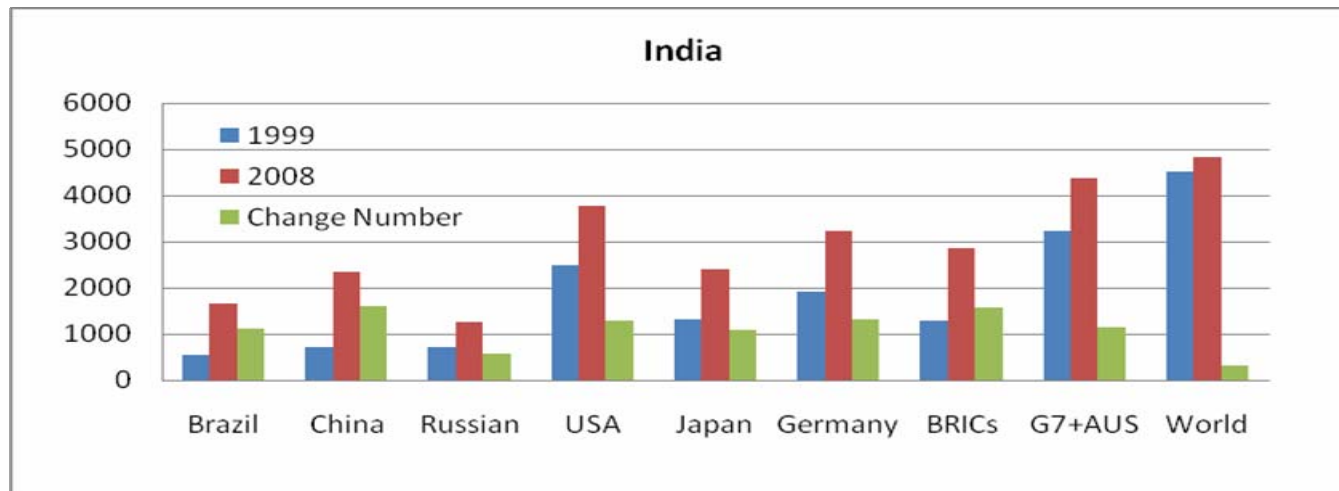


Facts 2.1: BRICs show great export diversification.



Facts 2.2: The extent of export diversification among BRICs is relatively lower.

2.1 (B) BRICs: Export Diversification (1999-2009)



Facts 2.3: Export diversification: the biggest increase among BRICs, followed by G7+AUS and the world.

2.2 Why We Care about Export Diversification?

- **Trade Growth**

- Export diversification is the main driver behind the exports growth of/among BRICs.
- Turning point of export diversification:
 - Klinger and Lederman(2006): US\$ 22500 (per capital GDP, PPP)
 - Carrère el(2007): US\$ 20000-22000 (per capital GDP, PPP)
- In 2009, BRICs per capital GDP (US\$, PPP, World Bank 2010):
Brazil 9517; China 5515; India 2721; Russia 14706

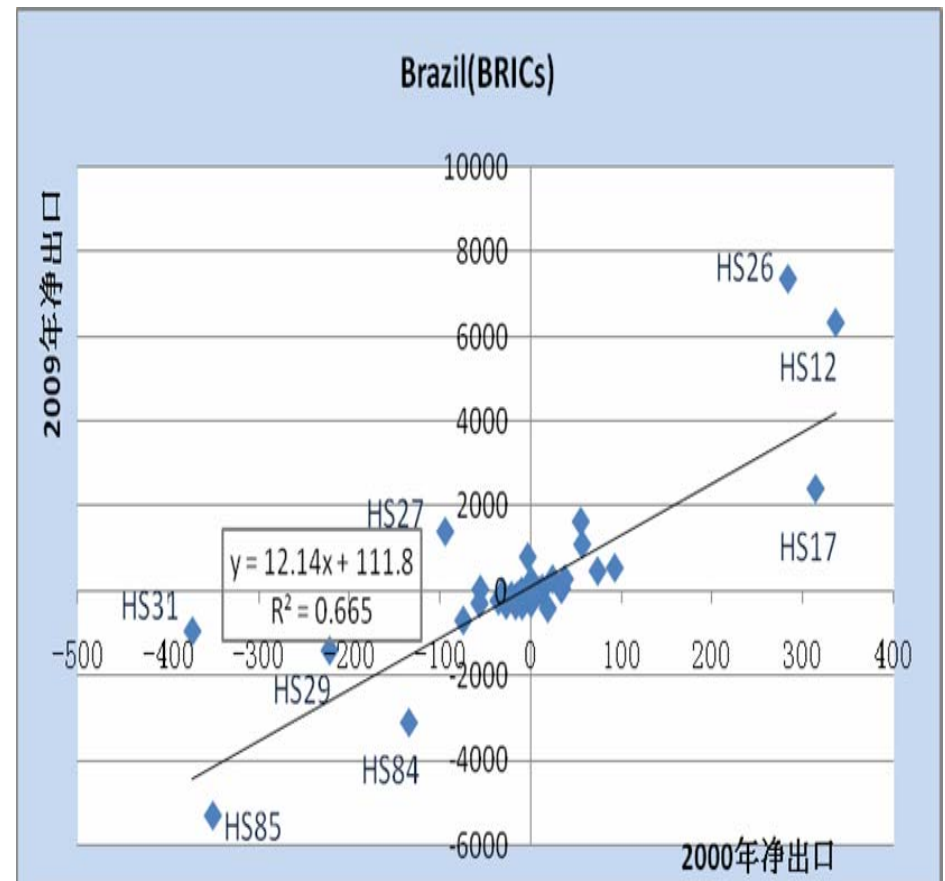
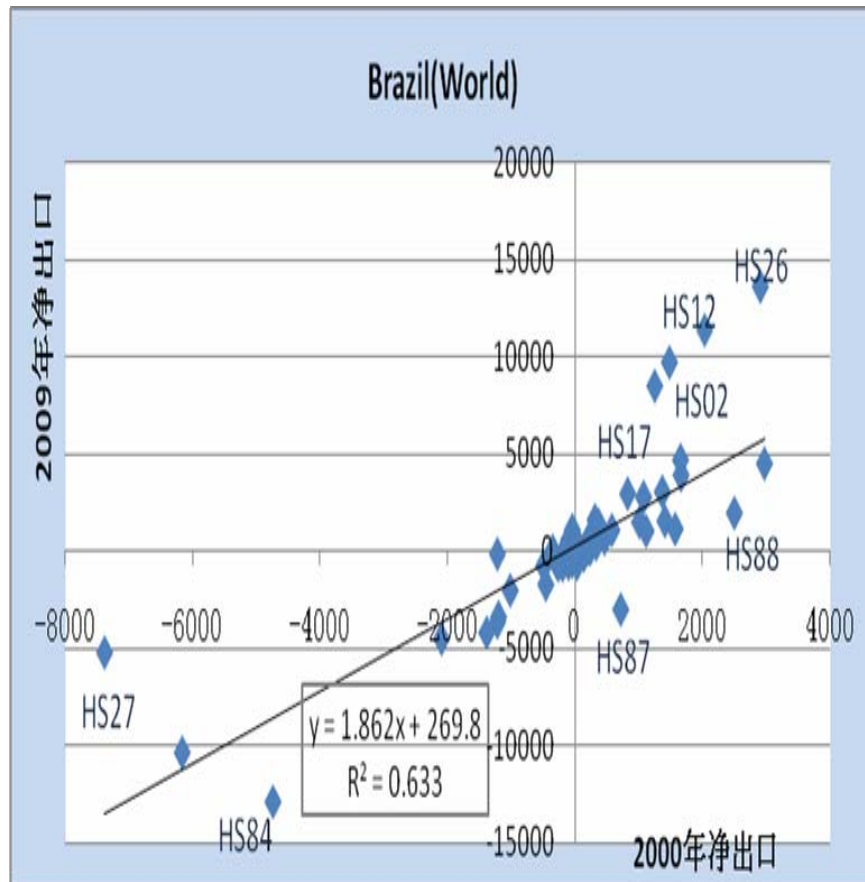
- **Economic Growth**

- reduce the exports uncertainty. Exports uncertainty could discourage risk-averse firms' investment and raise the uncertainty in the macro economic environment, therefore detrimental to long-term economic growth. (*Hesse, Heiko, 2008; Ghosh and Ostry, 1994; Bleaney and Greenaway, 2001*)
- stimulate the development of other industries, by bringing knowledge spillover benefits such as production techniques, management and marketing expertise, thus. (*Guitierrez and Ferrantino, 2000; Al-Marhubi, 2000; Agosin, 2007; Lederman and Maloney, 2007*)

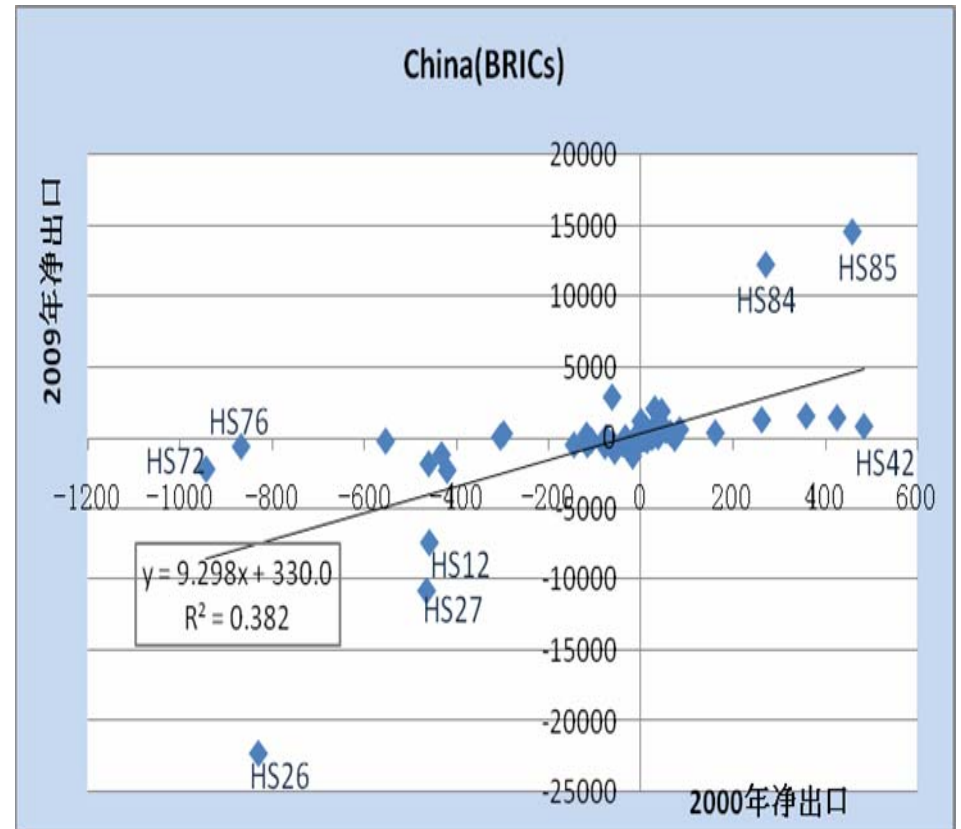
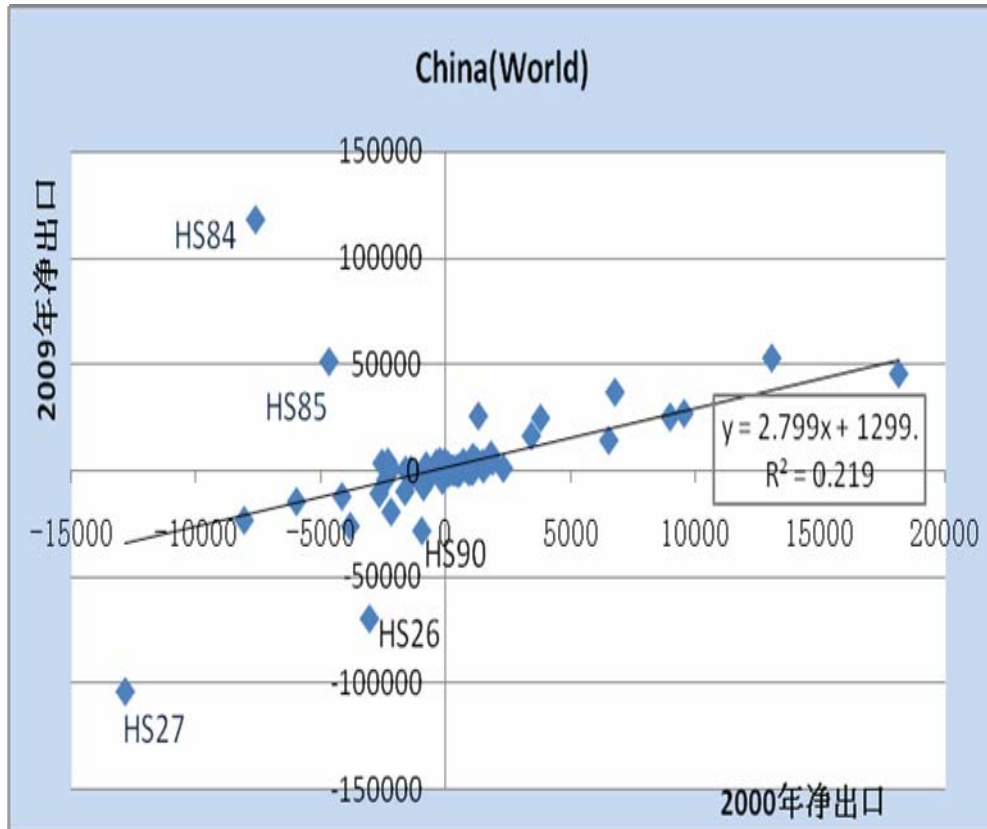


- **Part 3 Trade Balance**

3.1(A) BRICs: Structural Change of Trade Balance (2000-2009年)



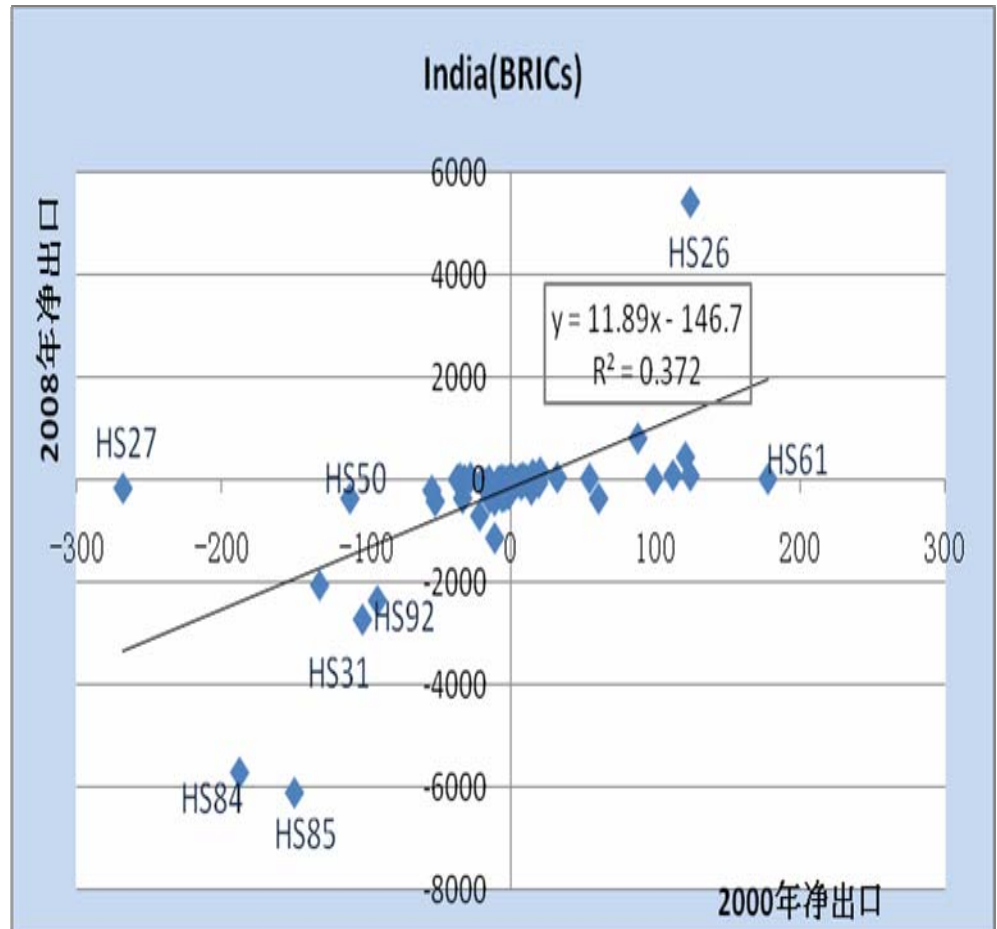
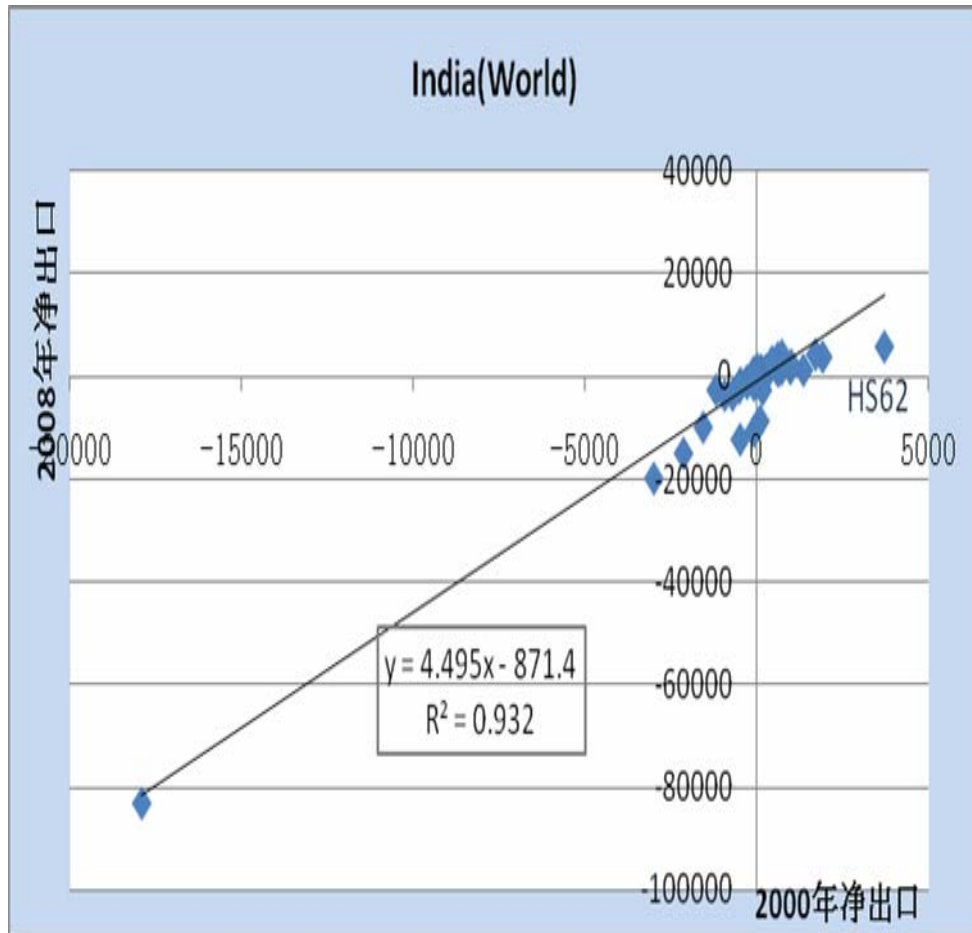
3.1(B) BRICs: Structural Change of Trade Balance (2000-2009年)



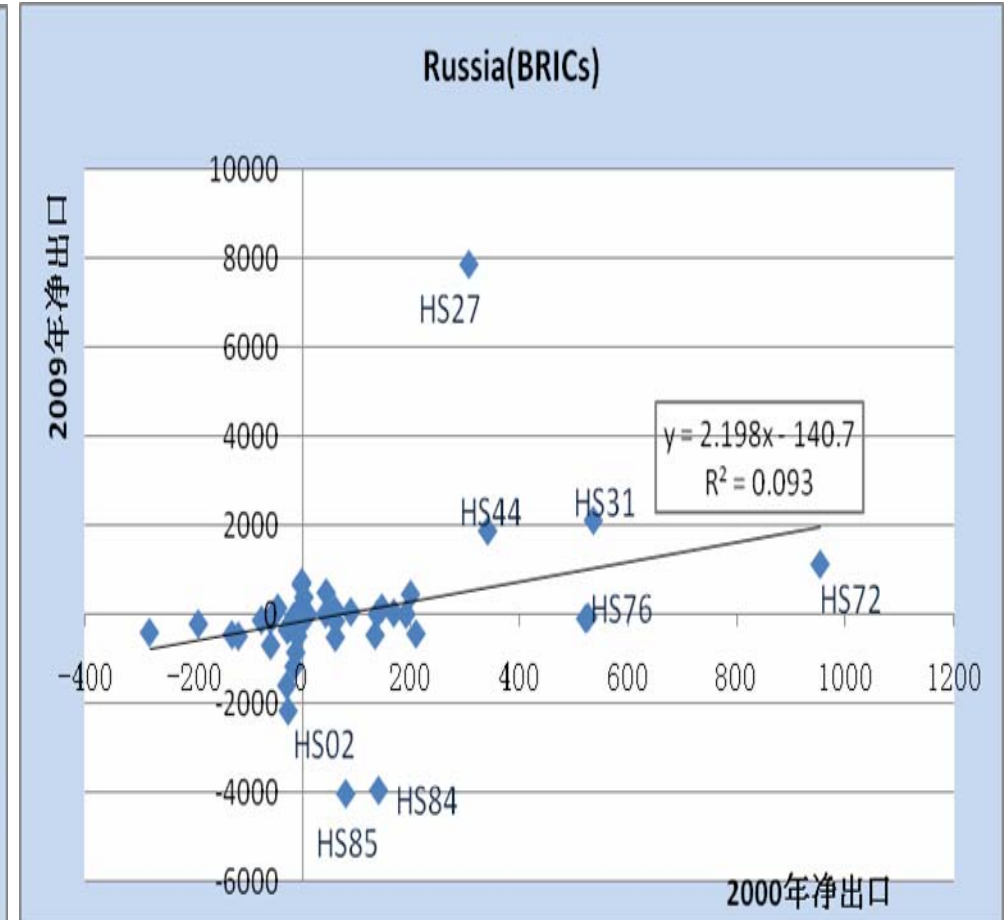
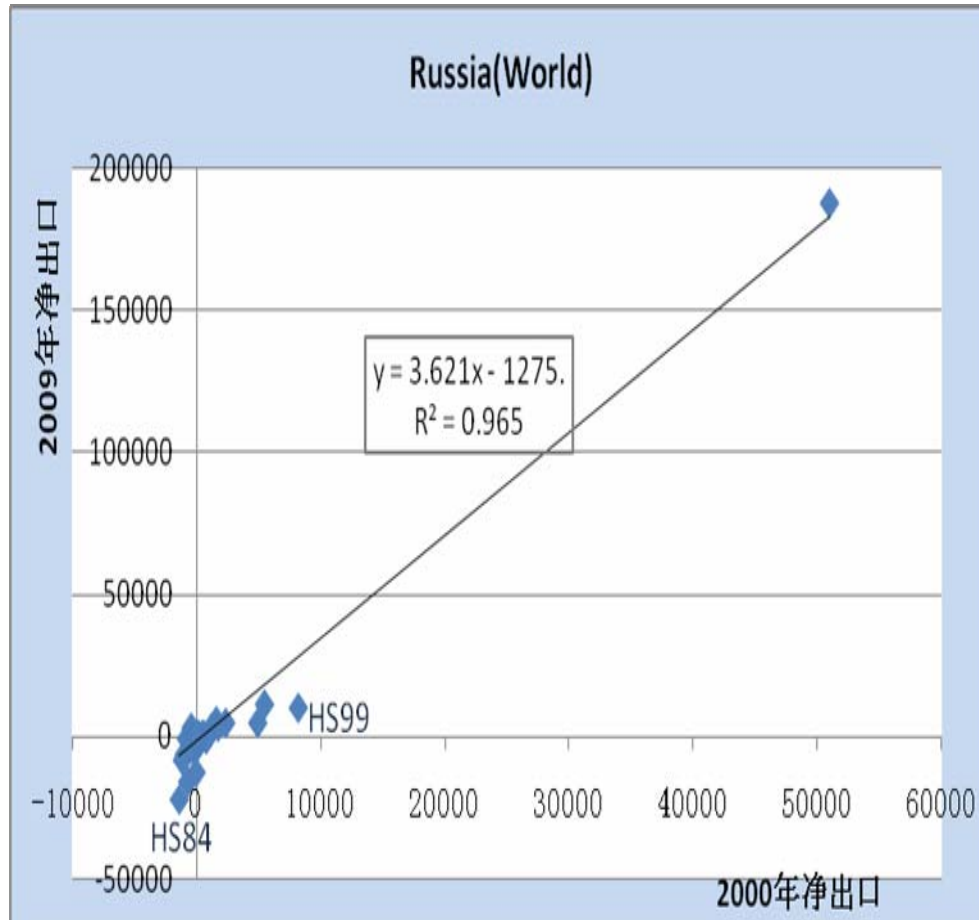
Unit: Million

Note: H12 Oil seed, oleagic fruits, grain, seed, fruit, etc, nes; HS26 Ores, slag and ash; HS27 Mineral fuels, oils, distillation products, etc; HS 42 Articles of leather, animal gut, harness, travel goods; HS 72 Iron and steel; HS 76 Aluminium and articles thereof; HS84 Nuclear reactors, boilers, machinery, etc; HS 85 Electrical, electronic equipment; HS90 Optical, photo, technical, medical, etc apparatus.

3.1(C) BRICs: Structural Change of Trade Balance (2000-2009年)



3.1(D) BRICs: Structural Change of Trade Balance (2000-2009年)



3.2 BRICs: Change of Comparative Advantage (2000-2009)

	Brazil		China		India		Russia	
	World	BRICs	World	BRICs	World	BRICs	World	BRICs
HS02	+							-
HS12	+	+	-					
HS17	+	-						
HS26	+	+	-	-		+		
HS27	+	+	-	-		+		+
HS29		+						
HS31		+				-		+
HS42			-					
HS44								+
HS50						+		
HS61						-		
HS62					-			
HS72			+					-
HS76			+					-
HS84	-	-	+	+		-	-	-
HS85		-	+	+		-		-
HS87	-							
HS88	-							
HS90				-				
HS92						-		
HS99							-	

Unit: Million

Note: HS02 Meat and edible meat offal; HS12 Oil seed, oleagic fruits, grain, seed, fruit, etc, nes; HS17 Sugars and sugar confectionery; HS26 Ores, slag and ash; HS27 Mineral fuels, oils, distillation products, etc; HS29 Organic chemicals; HS31 Fertilizers; HS42 Articles of leather, animal gut, harness, travel goods; HS44 Wood and articles of wood, wood charcoal; HS50 Silk; HS61 Articles of apparel, accessories, knit or crochet; HS62 Articles of apparel, accessories, not knit or crochet; HS72 Iron and steel; HS76 Aluminium and articles thereof; HS84 Nuclear reactors, boilers, machinery, etc; HS85 Electrical, electronic equipment; HS87 Vehicles other than railway, tramway; HS88 Aircraft, spacecraft, and parts thereof; HS90 Optical, photo, technical, medical, etc apparatus; HS92 Musical instruments, parts and accessories; HS99 Commodities not elsewhere specified.

Source: UN COMTRADE; Authors' calculation.

3.3 Good News or Bad News?

- **Bad News:**

Resource Curse

Dutch Disease

- **Good News:**

Recent studies and research show that the “resource curse” is not necessarily true

Lederman and Maloney (2007)

World Bank (2002)

Australia and Canada

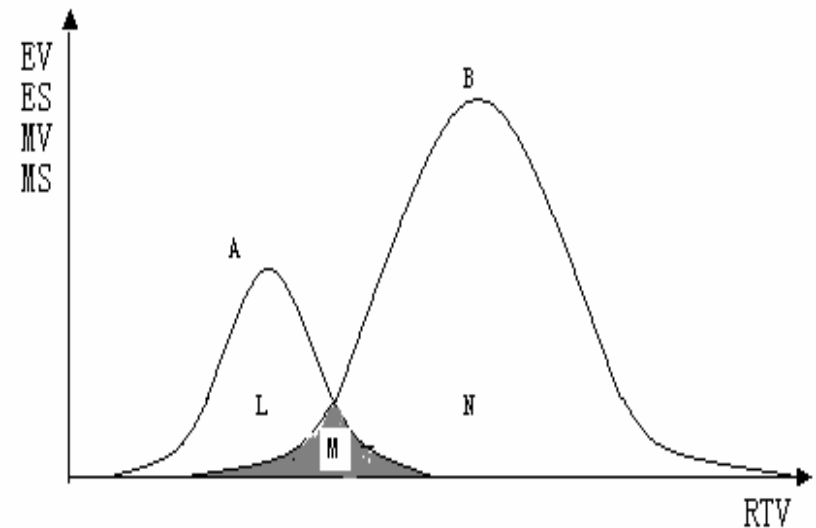


- **Part 4 Competitive Complementary and Competitive Stress**

4.1 Fan, Guan, Yao(2006)

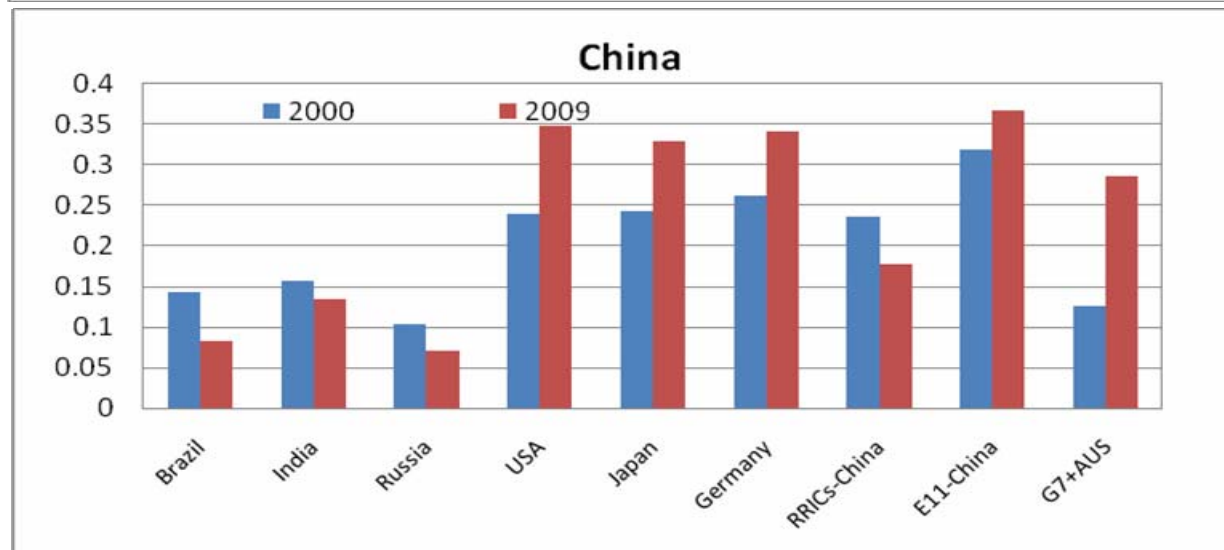
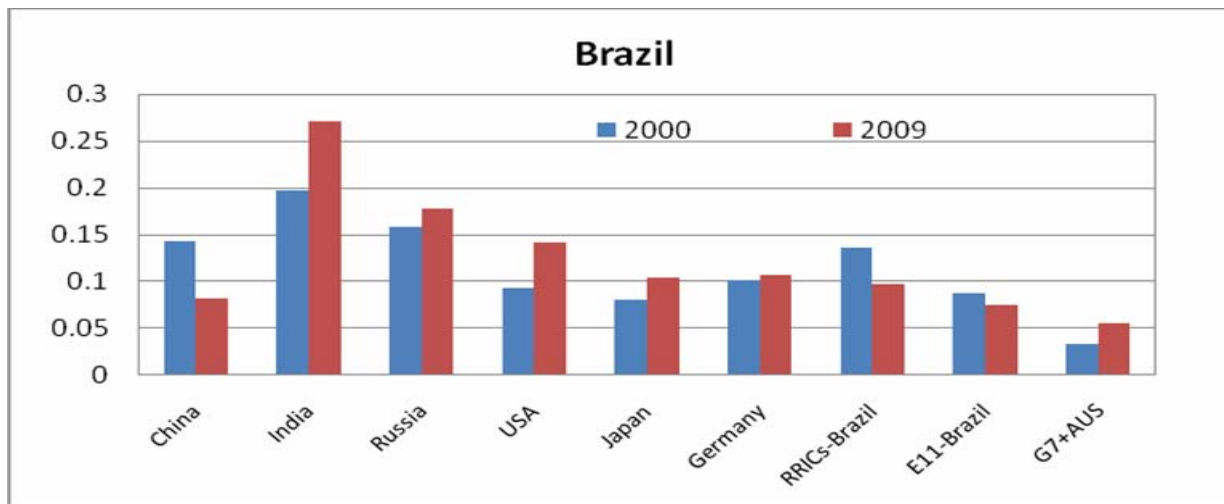
$$CCI_{AB} = \frac{2 \times S_M}{S_L + S_N} = \frac{2 \times \sum_{j=1}^m \min(X_{Aj}, X_{Bj})}{\sum_{j=1}^m (X_{Aj} + X_{Bj})}$$

$$CSI_{AB} = \frac{S_M}{S_N} = \frac{\sum_{j=1}^m \min(X_{Aj}, X_{Bj})}{\sum_{j=1}^m (X_{Bj})}$$



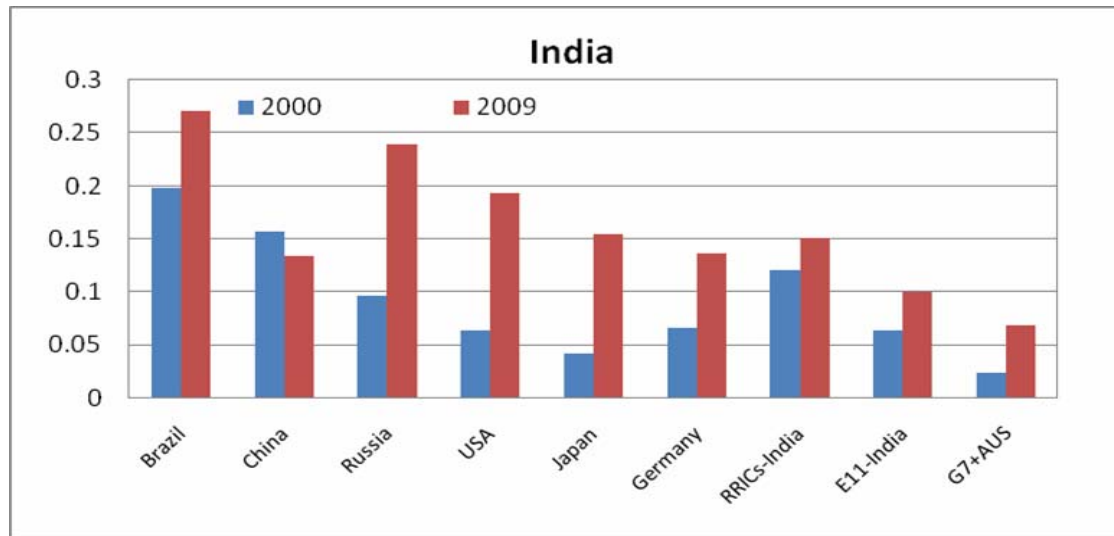
- CCI: the proportion of the overlapping parts of trade one specific country and its trading partners exported to a designated market among their combined exports volume. It measures a pair of trade partner shares more competition or complementarities. The bigger the number is, the fierce competition between two countries is.
- CSI : the proportion of overlapping parts of trade one specific country and its trading partners exported to a designated market among its total exports. It is used to measure one country's competitive stress on its trading partners. The bigger the number is, the more competition stress its trading partners feel.

4.2(A) BRICs: Coefficient of Competition (2000-2009)

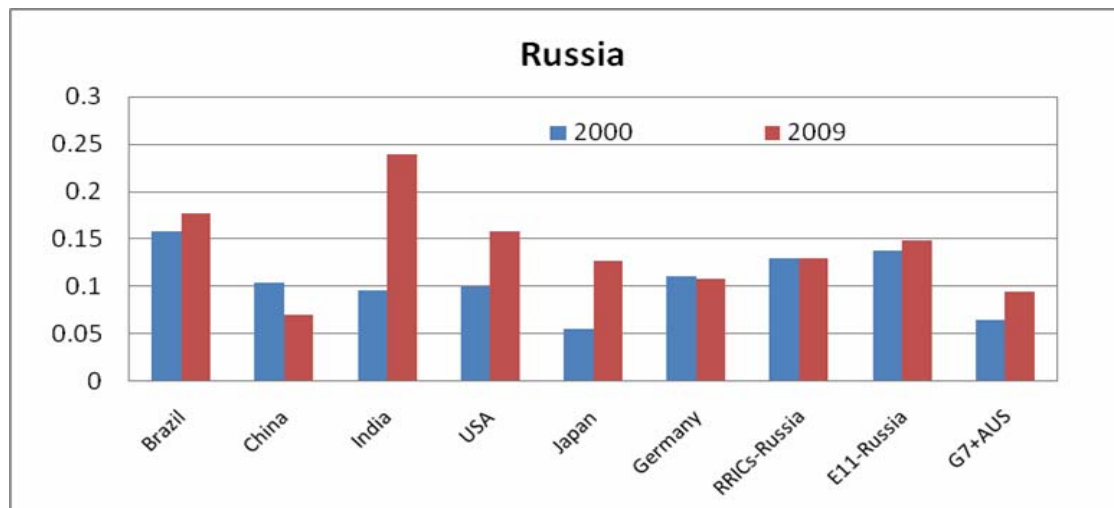


Facts 4.1: BRICs generally have more competition among them than with the major developed countries, except China.

4.2(B) BRICs: Coefficient of Competition (2000-2009)

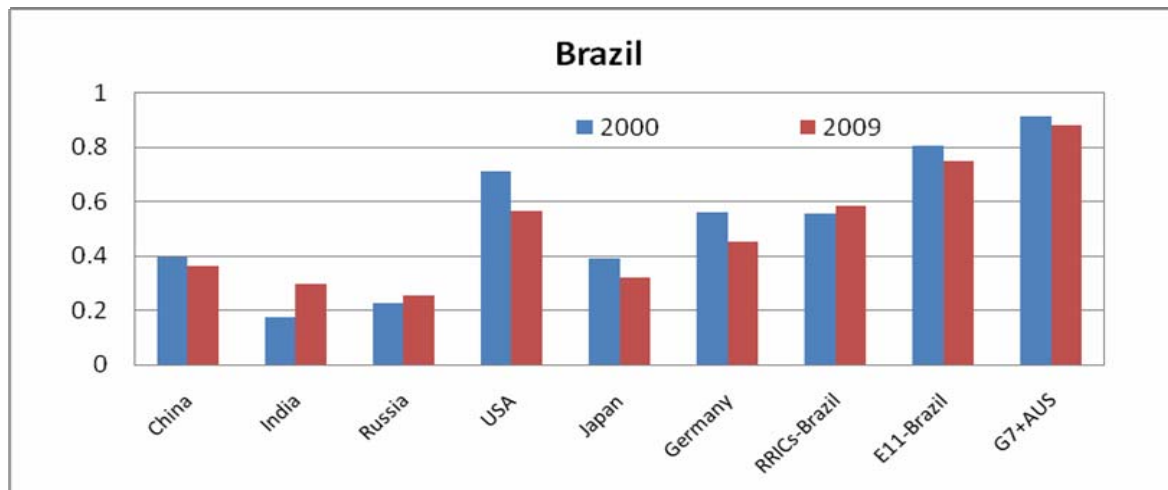


Facts 4.2: The speed of competition intensity growth between BRICs and major developed countries is much faster than that among BRICs .

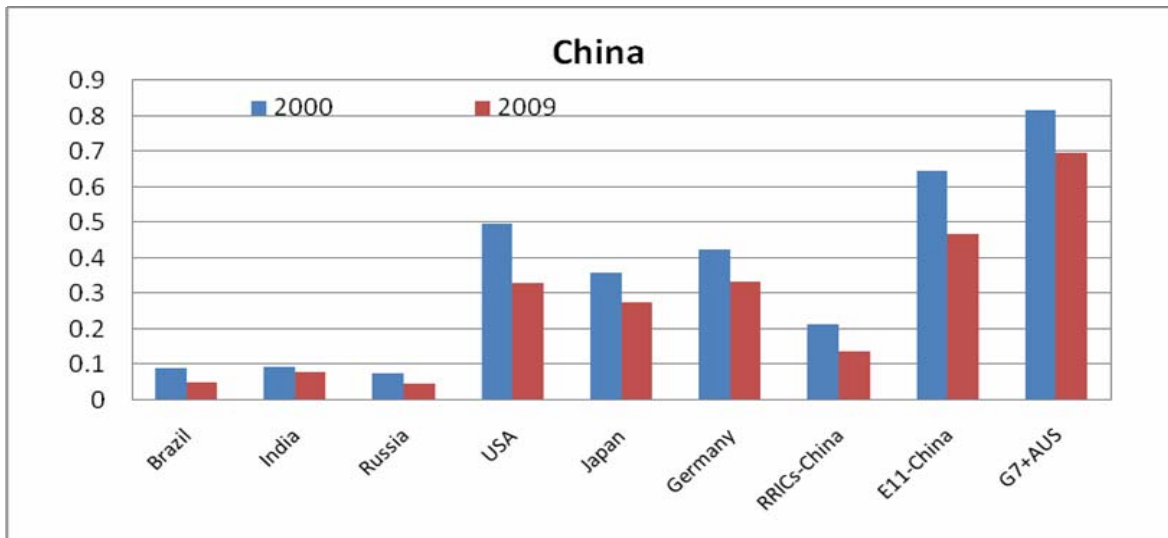


Facts 4.3: When Brazil, India and Russia saw their competition with other BRICs members and major developed countries increase considerably, their competition with China dropped by varying degrees.

4.3(A) BRICs: Coefficient of Competition Pressure (2000-2009)

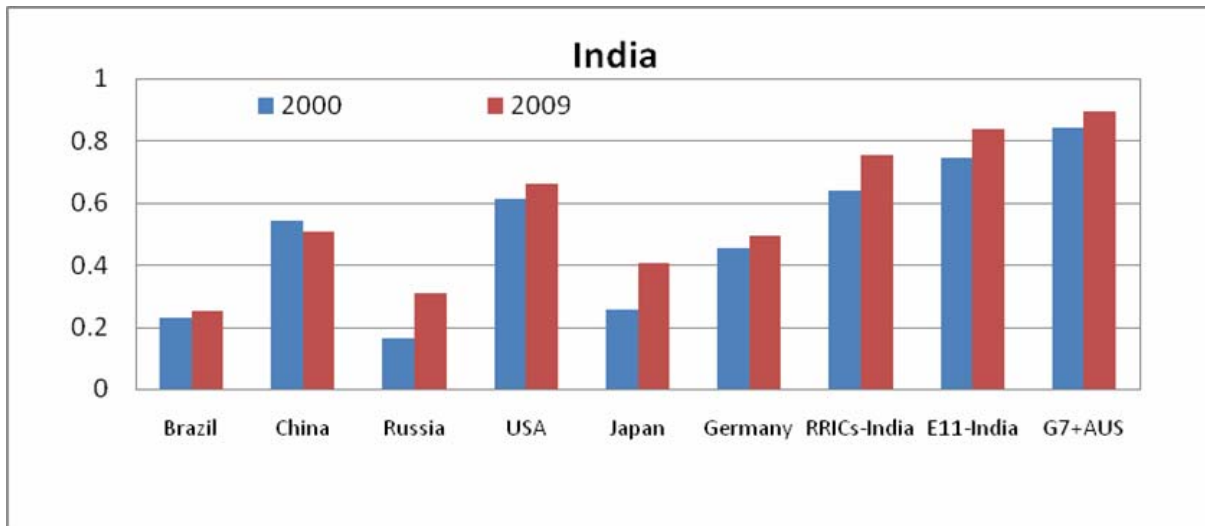


Facts 4.4: Brazil: feels increasing competition stress from India and Russia; decreasing stress level from China.

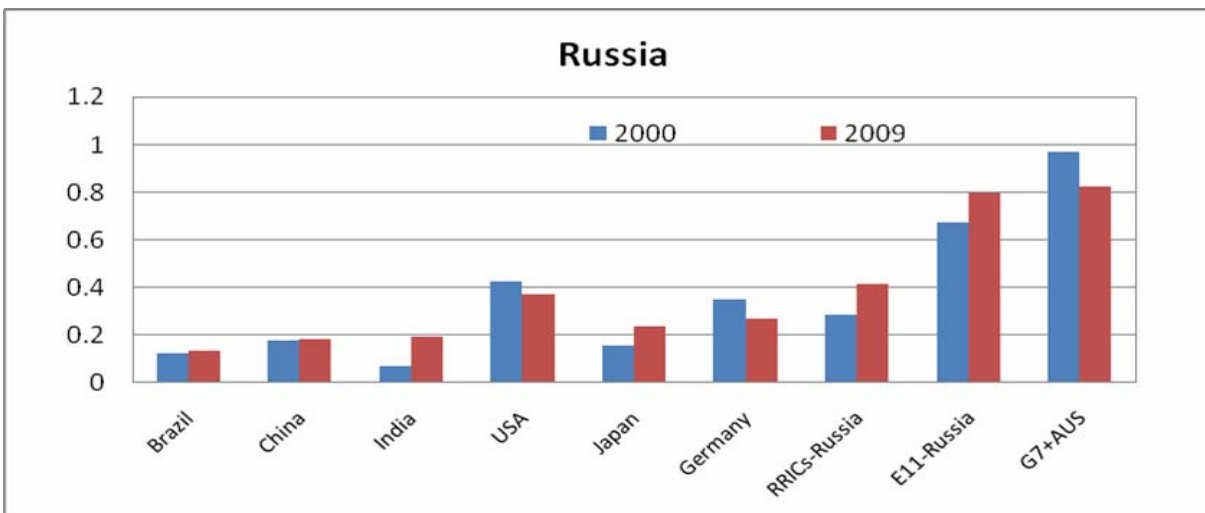


Facts 4.5: China: feels significantly dropping competition stress

4.3(B) BRICs: Coefficient of Competition Pressure (2000-2009)



Facts 4.6: India: the competition stress feels from other countries and groups of countries all increased, except for China.



Facts 4.7: Russia: see the competition stress from emerging economies increase; reduced stress from America, Germany and G7+AUS.

Major Findings

- The BRICs have all grown into markedly increased interdependency and complementarities among themselves, while still rely heavily on developed countries' markets.
- Expanding the range of product varieties exported to the existing markets will remain as a major instrument to boost BRICs countries' exports growth, especially the trade among themselves.
- Trade balance analysis shows, China's comparative advantages in the sophisticatedly processed products area strengthened, while other BRICs countries saw their comparative advantages enhanced in the agriculture and mineral products.
- BRICs have more competition with emerging economies than they have with major developed countries, while the speed of competition intensity growth between BRICs and major developed countries is much faster than that among BRICs . In addition, the competition stress generated from their internal trade is far smaller than that from outside.



Conclusion

- There lies great trade potentials for BRICs' international trade, especially for their internal trade.