

# **International Seminar on Patterns of Economic Development, Social Change, and Fertility Decline in Comparative Perspective: Analysis and Policy Implications**

*Shanghai, China, 24-26 May 2012*

Organized by  
IUSSP Panel on Below Replacement Fertility: Causes, Consequences and Policy Responses  
and  
the School of Social Development and Public Policy of Fudan University

## **Report**

(prepared by Minja Kim Choe and Wang Feng, Co-organizers)

During the past couple of decades, many countries have experienced rapid economic development, as well as extensive changes in social and political conditions. These changes, in turn, resulted in fertility declines to very low levels. The pace of decline and the current level of fertility have been widely diverse. The total fertility rates estimated for most countries in Europe, East Asia and Oceania, as well as some countries in Latin America and the Caribbean, the Middle East and North Africa, range from below 1.0 to 2.1. A total fertility rate at a level of 1.2 or 2.1 has extremely different effects on population's age structure and growth, along with important implications for institutions and policies. As a result, fertility levels have captured the attention of policy makers and scientists alike. Research, however, has yet to produce a comprehensive understanding of fertility behavior across low-fertility countries.

The aim of this seminar was (1) to improve the understanding of the patterns and causes of fertility decline to below replacement level in different settings and paces of economic development and social change, (2) to examine consequences of sustained below replacement fertility, and (3) to consider their policy implications. The Seminar was jointly organized by the IUSSP Panel on Below Replacement Fertility: Causes, Consequences and Policy Responses and the School of Social Development and Public Policy of Fudan University. Two days of the Seminar were organized as a sub-forum of the Shanghai Forum, an international economic forum hosted by Fudan University.

Twenty-nine papers were presented at the Seminar. Seventeen papers were selected by the IUSSP panel through a call for papers, and 12 papers were selected by Fudan University for the sub-panel of the Shanghai Forum. Two international observers and about a dozen local (Chinese) observers participated as well. The Agenda of the Seminar and the List of Participants are attached.

## **Global View on the Future of Population**

The Seminar began with the Keynote speech by Peter McDonald, President of IUSSP. The presentation focused on the concern about future decline in the size of the labour force and its potential economic impacts. He noted that demographers tend to address the problem through increases in fertility and/or 'replacement migration' – using migration to make up for the deficit in labour supply, focusing on the age-sex composition of the population. He proposed that a more meaningful approach would be modeling future labour supply using (1) population composition by age and sex, (2) employment to population ratio, and (3) labour productivity (output per unit of labour input). Productivity can also be subdivided into the level of productivity of each age and sex category. He introduced the economic-demographic projection model, MoDEM2, which can be used for such analysis. The model can be used to examine the implications for future labour supply and GDP per capita of varying future fertility scenarios for East Asian countries.

The global view on the future of population size and structure together with their implications on labour supply and old-age support was discussed by a number of other participants. Paper by Stressnig and Lutz (presented by Stressing) tried to estimate "optimal" fertility that will result in human resources for producing the best possible quality of life for all citizens. The key factors to be considered are human capital development measured by education and age dependency. The paper concludes that the optimal fertility is well below the demographic replacement level.

Lee and Mason's paper (presented by Lee) draws on age profiles of consumption and labour income from National Transfer Accounts for 32 countries around the world to calculate the level of fertility that would maximize, in steady state, 1) the general support ratio; 2) the fiscal support ratio; 3) life time consumption in an economy with a given capital-output ratio; 4) life time consumption maximized over both fertility and the capital-labour ratio. In most cases, fertility that maximizes the fiscal support ratio is quite high, well above replacement. Fertility that maximizes the general support ratio is near replacement level. When the capital-output ratio is maintained at 3.0, the fertility that maximizes life time consumption is lower, generally between 1.5 and 2 births per woman. In less than half the cases (almost all rich countries) there is a choice of both fertility and saving rates that maximizes lifetime consumption, and in this case fertility typically lies between 1.0 and 1.6 births per woman. These results suggest that countries should not be overly concerned about below replacement fertility, at least from the point of view of costly intergenerational transfers.

The paper by Basten, Sobotka, Zeman, Barakat, and Lutz (presented by Basten) was based on the 2011 global internet survey of experts, conducted by IIASA and Oxford University, on likely future trends in fertility. The experts expect that fertility will stay below replacement level in the next 50 years, much lower than the levels projected by United Nations, even when current negative tempo effect loses relevance. Cultural and social forces affecting fertility intentions are not likely to change much in the next 50 years.

## **Migration**

Two papers examined the role of international migration as a response to sustained below-replacement fertility. Sobotka and Zeman's paper (presented by Sobotka) introduced the concept of "birth replacement" and "population replacement" in the presence of migration. Their analyses of fertility and migration in many countries show that recent levels of fertility are sufficient to maintain population replacement in combination with the recent levels of migration. In East Asian countries, however, the role of migration in "population replacement" is weak. They conclude that "optimal fertility" may well be below 1.6 in high-immigration countries and above 2.0 in high emigration countries.

Billari and Dalla-Zuanna (presented by Dalla-Zuanna) conducted similar analyses using the concept of "replacement of birth cohort size" leading to "working-age population replacement migration." Regional population dynamics in Italy show that replacement migration helped stabilize the size of labour force and old-age dependency ratio. "Replacement migration" is relevant in small and open economies.

## **Causes of low fertility, prospects of increase**

A number of papers examined causes of low fertility at country level. In China, there is no question that population policy had strong impact on fertility, explaining variations by residence (Xiahong Ma; Chen, Retherford, Choe, Li, and Cui presented by Chen; Niu, Qi, and Wang presented by Niu). At the same time, factors associated with development such as women's education and income explain a large extent of fertility differentials. Economic development and increase in women's education contribute to decline in period fertility rates through postponement of childbearing (Chen; Frejka and Zakharov presented by Frejka; Jensen and Ringdal presented by Jensen; Li Ma; Tsuya) during the early phase of low fertility. Luci's paper shows that once the postponement of childbearing ends, economic development results in an increase in fertility in countries with a high level of women's employment and a high level of public assistance to working parents with young children. Amaral's presentation (based on paper by Amaral, Almeida, Rios-Neto and Potter) shows that as women's employment increases, gender and economic inequality diminishes.

Rindfuss looked for explanations for the wide variation in fertility in low-fertility countries and concluded that the variation in institutions that make the combination of mother role and worker role easier or more difficult is the main factor. Variations in factors such as the extent of the child-caring role of schools, ease of returning to school, structure of labour market affecting the compatibility of worker role and mother role, gender equity at home and in the labour market, and government programs that promote the compatibility of worker role and mother role are likely to explain the variations in levels of low fertility. Consistent with these arguments, Carlsson Dahlberg's paper shows that there has not been much change in the amount of variance in birth probabilities for the birth cohorts 1936 to 1963 in Sweden where the institutional setting is favorable for combining mother role and worker role.

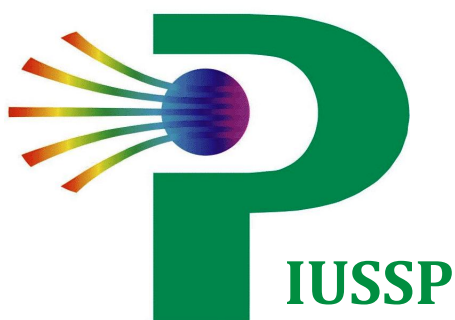
## **Population Policies**

Two papers focused on the analyses of recent trends in fertility with the intent of measuring the effect of population policies. Spoorenberg and Enkhtsetseg's paper (presented by Enkhtsetseg) concludes that the adoption of the new social policy by the Mongolian government in 2005 including child welfare and monetary assistance for families and children is likely to have resulted in an increase in the total fertility rate from 1.95 in 2005 to 2.69 in 2010. On the other hand, Frejka and Zakharov's paper (presented by Frejka) concludes that population policies in Russia designed to raise fertility resulted in reversing the postponement of childbearing and an increase in period fertility but failed to increase cohort fertility. The paper argues that more fundamental changes in societies and the implementation of policies over an extended period of time may result in an increase in cohort fertility.

Demeny's paper proposes a reform of state managed pay-as-you-go social security system with a radically novel pronatalist reform. He proposes that a specific fraction of social security contributions made by individual labour force participants be paid directly to their parents during their parents' life time. Thus, parents who raise children to be productive workers will be compensated directly for their efforts.

## **Post-seminar meeting of the panel members**

The panel members present at the Seminar, Wang Feng, Tomas Frejka, Beatriz Figueroa, and Minja Kim Choe, met and discussed publication options. Wang Feng reported that Leana Li from Springer Asia Limited Beijing Representative Office indicated that Springer would be interested in publishing an edited volume based on the papers presented at the Seminar. This idea was announced at the closing session of the Seminar on 27 May.



**International Seminar on Patterns of Economic Development,  
Social Change, and Fertility Decline in Comparative Perspective:**

**Analysis and Policy Implications**

**Shanghai, 25-27 May 2012**

**Thursday, May 24**

**Venue: Rmada Hotel**

Address: 1888 Huangxing Road, Yangpu, Shanghai, P.R.C(200433)

中国上海杨浦区市黄兴路 1888 号 邮编 : 200433

Website: <http://www.ramadash.com/en/index.html>

Tel : +86(21) 5550-9999

**Whole Day      Arrival of participants**

**Friday, May 25**

Venue: Room 919, the Liberal Arts Building ,Fudan University

复旦大学文科大楼 919

**Registration and IUSSP Seminar**

**8:30-8:50      IUSSP Seminar Registration, Hotel Payment**

**Opening of IUSSP Seminar**

**8:50-9:00**

**Welcome by:**

PENG Xizhe, Professor and Dean, School of Social Development  
and Public Policy, Fudan University

Minja CHOE and WANG Feng, Organizers

**IUSSP Session I:****09:00-12:00****Emerging Global Regime of Low Fertility****Chair: WANG Feng**

<b>Time</b>	<b>Guest Speaker</b>	<b>Caption</b>
09:00-09:30	Peter MCDONALD	Keynote Speech
09:30-09:50	Stuart BASTEN	The Future of Low Fertility: Results of a Global Expert Survey
09:50-10:10	An-Magritt JENSEN	An End of Fertility Decline in Europe? Variations by Contexts
<b>10:10-10:30</b>	<b>Coffee Break</b>	
10:30-10:50	Tomas FREJKA	Comprehensive Analyses of Fertility Trends in the Russian Federation during the Past Half Century
10:50-11:10	Ernesto AMARAL	Effects of the Age-education Structure of Female Workers on Male Earnings in Brazil
11:10-11:30	Erich STRIESSNIG	Optimal Fertility
11:30-12:00	Discussion	

**12:00-13:30 Lunch****IUSSP Session II:****14:00-17:30****Explaining Low Fertility****Chair: Beatriz FIGUEROA**

<b>Time</b>	<b>Guest Speaker</b>	<b>Caption</b>
14:00-14:20	Angela LUCI	The Impact of Income on Fertility– breaking Up Stylized Facts
14:20-14:40	Johan CARLSSON DAHLBERG	Family Influence on Becoming a Parent: Sibling Correlations in Propensity to Enter Parenthood for Swedish Men and Women Born 1936-1958
14:40-15:00	Ronald R. RINDFUSS	Why the Wide Variation in Fertility in Low Fertility Countries
15:00-15:20	Discussion	
<b>15:20-15:40</b>	<b>Coffee Break</b>	
15:40-16:00	Gianpiero DALLA- ZUANNA	Is Replacement Migration Actually Taking Place in Low Fertility Countries?
16:00-16:20	YAP Mui Teng	Immigration and Low Fertility in Singapore: What are the Options?
16:20-16:40	Tomas SOBOTKA	Migration, Fertility and Population Replacement in the Developed World

16:40-17:00	MA Li	Labor Markets, Social Policy and Motherhood Entry - the Case of South Korea
17:00-17:30	Discussion	
<b>17:30-18:00</b>	<b>Shanghai Forum Registration( Crown Plaza Fudan)</b>	
<b>18:00-19:30</b>	<b>Dinner</b>	

**Saturday, May 26**

**Shanghai Forum and IUSSP Seminar**

Venue: Meeting Hall, Xijiao State Guest Hotel 西郊宾馆会议中心

09:00-12:00 Opening Ceremony of Shanghai Forum

12:00-13:30 Buffet Lunch

**Opening of Sub-Forum:**

**Asia's Population and Social Development for 2011-2020:  
New Challenge, New Strategy**

Venue: Lan Hall, Meeting Hall, Xijiao State Guest Hotel

西郊宾馆会议中心兰宫

**13:30-13:40 Welcome by:**

PENG Xizhe, Professor and Dean, School of Social Development and Public Policy, Fudan University

**Shanghai Forum Session I/IUSSP Session III:**

**13:40-17:00 Asia's New Demographics**

**Chair: PENG Xizhe**

<b>Time</b>	<b>Guest Speaker</b>	<b>Caption</b>
13:40-14:00	Noriko TSUYA	Education, Employment, and First Marriage in Japan
14:00-14:20	Enkhtsetseg BYAMBAA	Social Policy and Fertility Development in Mongolia
14:20-14:40	Leela VISARIA	Demographic Transition in South India
14:40-15:00	Discussion	
<b>15:00-15:30</b>	<b>Photo for Sub-forum and Coffee Break</b>	

15:30-15:50	LI Jianmin	New Changes in the Population situation and its Effect on Social and Economic Development in China
15:50-16:10	Sureeporn PUNPUING	Thailand Demographic Transition
16:10-16:30	Meimanat HOSSEINI-CHAVOSHI	Demographic Transition in Iran: Past Trends and Future Prospects
16:30-17:00	Discussion	
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<b>19:00-21:00</b>	<b>Opening Banquet for Shanghai Forum (Crowne Plaza Fudan)</b>	

### Sunday, May 27

Venue: Function Hall, 13<sup>th</sup> Floor, East Main Building of Guanghua Tower, Fudan University

复旦大学光华楼东楼 13 楼多功能厅

#### Shanghai Forum Session II/IUSSP Session IV:

**09:00-12:00** **Low Fertility in China**

**Chair: GU Baochang**

Time	Guest Speaker	Caption
09:00-09:20	ZHAI Zhenwu	Fertility Change and Development Pattern Transition in China
09:20-09:40	ZHENG Zhenzhen	Intergenerational Effects on Fertility and Intended Family Size: the implication to future fertility change in China
09:40-10:00	Jiajian CHEN	The rural-urban differentials in fertility decline in China, 1975-2005
10:00-10:20	Ethan SHARYGIN	Marriage in uncertain times: human capital, demographic change, and marriage outcomes in China
10:20-10:40	Discussion	
<b>10:40-10:50</b>	<b>Coffee Break</b>	
10:50-11:10	JIANG Quanbao	Marriage Squeeze, Never Married Proportion and Mean Age at First Marriage in China
11:10-11:30	NIU Jianlin	Spatial Diffusion of Fertility Transition in China: 1982-2000
11:30-11:50	MA Xiaohong	Revelation of Convergent Fertility Desire among Different Groups to Adjustment of Fertility Policy -----Based on the Comparative Research in Beijing
11:50-12:00	Discussion	
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<b>12:00-13:30</b>	<b>Buffet Lunch ( Fuxuan Hotel )</b>	



**Shanghai Forum Session III/IUSSP Session V:**

**13:30-17:00**

**New Demographics: Policy Implications**

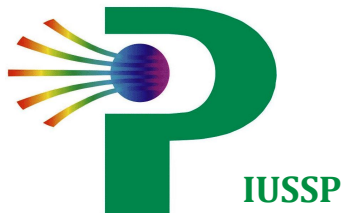
Chair: ZHANG Li

<b>Time</b>	<b>Guest Speaker</b>	<b>Caption</b>
13:30-13:50	Ronald LEE	Is Fertility Too Low? Capital, Transfers and Consumption
13:50-14:10	Paul DEMENY	A Fourth Pillar for Old Age Pensions: A Radically Novel Pronatalist Reform
14:10-14:30	Leiwen JIANG	Education, Fertility Change, and Climate Change
14:40-14:50	Discussion	
<b>14:50-15:10</b>	<b>Coffee Break</b>	
15:10-15:30	ZHANG Kaiti	Urban and Rural Integration: Social Service System Construction Plan
15:30-15:50	LIU Junqiang	The Sleeping 600 Billion: the Natural and Unnatural Causes of the Huge Surpluses of PAYG Social Insurance Programs in China
15:50-16:10	WU Ruijun	Collaborative Study on Population Movement and Public Resources Allocation
16:10-16:30	ZHOU Haiwang	The Research on Population Development and Policy issues of Shanghai
16:30-16:50	Discussion	
<b>16:50-17:00</b>	<b>Closing Remarks for Sub-forum and IUSSP Seminar by PENG Xizhe and Minja CHOE</b>	
<b>17:00-18:00</b>	<b>Buffet Dinner (Crowne Plaza Fudan)</b>	
<b>19:00-21:00</b>	<b>Shanghai Forum Evening</b>	

**Contact Persons:**

**TAO Li** : Tel: +86 137 9528 5745 ,Email: 10110730004@fudan.edu.cn

**WAN Qian**: Tel: +86 159 0063 0008 , Email: [09110730003@fudan.edu.cn](mailto:09110730003@fudan.edu.cn)



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*Shanghai, 25-27 May 2012*

**IUSSP Panel:**

**CHOE, Minja**

East-West Center  
Population and Health, Research Program  
1601 East West Road  
Honolulu, HI 96848-1601  
USA  
[mchoe@hawaii.edu](mailto:mchoe@hawaii.edu)

**WANG, Feng**

The Brookings Institution  
Brookings-Tsinghua Center for Public Policy  
School of Public Policy & Management  
Tsinghua University  
Beijing, 100084  
China  
[fwang@uci.edu](mailto:fwang@uci.edu)

**FIGUEROA, Beatriz**

El Colegio de Mexico  
Centro de Estudios Demográficos y de Desarrollo  
Urbano  
Camino Al Ajusco 20  
Mexico D.F. 01000  
Mexico  
[beafig@colmex.mx](mailto:beafig@colmex.mx)

**FREJKA, Tomas**

3997 Coquina Drive  
Sanibel, Florida 33957  
USA  
[tfrejka@aol.com](mailto:tfrejka@aol.com)

**Fudan University:**

**PENG, Xizhe**

Fudan University  
Shanghai  
China  
[xzpeng@fudan.edu.cn](mailto:xzpeng@fudan.edu.cn)

**SHEN, Ke**

Fudan University  
Room 413, Building 4,  
No.408 Guo Ding Road,  
Yang Pu District,  
Shanghai, 200433  
China  
[shenke.ccerpku@yahoo.com.cn](mailto:shenke.ccerpku@yahoo.com.cn)

**WAN, Qian**

Fudan University  
Shanghai  
China  
[09110730003@fudan.edu.cn](mailto:09110730003@fudan.edu.cn)

**TAO, Li**

Fudan University  
Shanghai  
China  
[10110730004@fudan.edu.cn](mailto:10110730004@fudan.edu.cn)

## **Participants:**

### **AMARAL, Ernesto**

Federal University of Minas Gerais (UFMG)  
Rua Cláudio Manoel, 64, Apt. 802  
Belo Horizonte, MG 30140-100  
Brazil  
[eflamaral@gmail.com](mailto:eflamaral@gmail.com)

### **BASTEN, Stuart**

University of Oxford  
Department of Social Policy and Intervention  
32 Wellington Square  
Oxford, OX1 2ER  
United Kingdom  
[stuart.basten@spi.ox.ac.uk](mailto:stuart.basten@spi.ox.ac.uk)

### **CARLSSON DAHLBERG, Johan**

Stockholm University  
Department of Sociology  
Demography Unit  
Universitetsv. 10b  
Stockholm, 106 91  
Sweden  
[johan.dahlberg@sociology.su.se](mailto:johan.dahlberg@sociology.su.se)

### **CHEN, Jiajian**

East-West Center  
91-218 Makaina Place  
EWA Beach, HI 96706  
USA  
[chenj@eastwestcenter.org](mailto:chenj@eastwestcenter.org)

### **DALLA ZUANNA, Gianpiero**

University of Padova  
Via Cesare Battisti 241  
Padova, 35121  
Italy  
[gpdz@stat.unipd.it](mailto:gpdz@stat.unipd.it)

### **DEMENY, Paul**

The Population Council  
One Dag Hammarskjöld Plaza  
New York, NY 10017  
USA  
[pdemeny@popcouncil.org](mailto:pdemeny@popcouncil.org)

### **ENKHTSETSEG, Byambaa**

National University of Mongolia  
Mongolia  
[enkh@rocketmail.com](mailto:enkh@rocketmail.com)

### **JENSEN, An-Magritt**

Norwegian University of Science and Technology  
Department of Sociology and Political Science (ISS)  
Dragvoll, 7055  
Norway  
[anmagritt.jensen@svt.ntnu.no](mailto:anmagritt.jensen@svt.ntnu.no)

### **LEE, Ronald**

Departments of Demography and Economics  
University of California  
2232 Piedmont Ave  
Berkeley, CA 94720  
USA  
[rlee@demog.berkeley.edu](mailto:rlee@demog.berkeley.edu)

### **LUCI, Angela**

Université Paris 1 Sorbonne  
MSE, Bureau 215  
106-112 bd de l'Hôpital  
75013 Paris  
France  
[angela.luci@univ-paris1.fr](mailto:angela.luci@univ-paris1.fr)

### **MA, Li**

Stockholm University  
Department of Sociology  
Demography Unit  
Universitetsv. 10b  
Stockholm, 106 91  
Sweden  
[li.ma@sociology.su.se](mailto:li.ma@sociology.su.se)

### **MA, Xiaohong**

Beijing Population Research Institute  
No.6 Chegongzhuang Street  
Xicheng district  
Beijing, 100044  
China  
[maxhong2000@hotmail.com](mailto:maxhong2000@hotmail.com)

**MCDONALD, Peter**

The Australian National University  
Australian Demographic and Social Research Institute  
Canberra, 0200  
Australia  
[peter.mcdonald@anu.edu.au](mailto:peter.mcdonald@anu.edu.au)

**NIU, Jianlin**

Chinese Academy of Social Sciences  
# 5 Jianguo Men Nei Street  
Institute of population and Labor Economics  
Beijing 100732  
China  
[niuyl@cass.org.cn](mailto:niuyl@cass.org.cn)

**RINDFUSS, Ronald R.**

University of North Carolina at Chapel Hill  
Carolina Population Center  
University Square; CB #8120  
123 West Franklin St  
Chapel Hill, NC 27516-2524  
USA  
[ron\\_rindfuss@unc.edu](mailto:ron_rindfuss@unc.edu)

**SOBOTKA, Tomas**

Vienna Institute of demography  
Wohllebengasse 12-14, 6th Floor  
Vienna, A-1040  
Austria  
[tomas.sobotka@oeaw.ac.at](mailto:tomas.sobotka@oeaw.ac.at)

**STRIESSNIG, Erich**

Vienna University of Economics and Business  
Nordbergstr. 15/6/A  
Vienna, 1090  
Austria  
[erich.striessnig@wu.ac.at](mailto:erich.striessnig@wu.ac.at)

**TSUYA, Noriko**

Keio University  
Faculty of Economics  
2-15-45 Mita, Minato-ku  
Tokyo 108-8345  
Japan  
[tsuya@econ.keio.ac.jp](mailto:tsuya@econ.keio.ac.jp)

**ZHENG, Zhenzhen**

Institute of Population and Labor Economics,  
Chinese Academy of Social Sciences  
#5 Jianguomennei Street  
Institute of Population and Labor Economics  
Beijing 100732  
China  
[zhengzz@cass.org.cn](mailto:zhengzz@cass.org.cn)

**Observers:****CAI, Yong**

University of North Carolina, Chapel Hill  
Carolina Population Center  
155 Hamilton Hall CB#3210  
Chapel Hill, NC 27599-3210  
USA  
[caiyong@unc.edu](mailto:caiyong@unc.edu)

**GU, Baochang**

Renmin University of China  
Center for Population and Development Studies  
Science Building, Room A-0507  
No. 59 Zhongguancun Street, Haidian District  
Beijing 100872  
China  
[baochanggu@gmail.com](mailto:baochanggu@gmail.com)

**LI, Leana**

Springer Asia Limited Beijing Representative Office  
Room 408-412, Beijing Ideal Plaza  
No. 58 Northwest, 4th Ring Road  
Haidian District, Beijing  
China 100080  
[leana.li@springer.com](mailto:leana.li@springer.com)

**SUN, Chao**

Beijing Institute of Population Studies  
Department of sociology  
Beijing Administrative College  
Street of CheGongZhuang  
Beijing  
China  
[sunchaobac@gmail.com](mailto:sunchaobac@gmail.com)