

Speech  
at  
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by  
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Mr. Chairman, Professor Weiler,  
Dear Colleagues,  
Excellencies, Ministers, Scholars,  
Ladies and Gentlemen,

Our topic at this forum today – "University, Research Institutions and Industry: What Partnership to Develop Global Innovation Society?" – is a timely, challenging, yet ambitious one. I would like to congratulate the host and sponsors of this conference -- the government of Italy, UNESCO and the G8 -- for successfully putting together this significant event. I would like also to thank the organizers for inviting me to speak here.

My speech today has 3 parts. First, I will reflect on the key challenges that all countries face in the 21<sup>st</sup> century. My second part of the speech will address the importance of education and that of the synergy between the government, universities, research institutes, industries and businesses in building an innovation society, and I will share with you China's policy choices and practices, then move ahead for sustainability, how to overcome the barriers to strengthen the linkage of the triangle and to form

cluster to contribute to their competitiveness. Thirdly, I will add a few comments with a broader perspective on global cooperation.

## Part I.

The 21<sup>st</sup> century is characterized by globalization. What is the key feature of that process? One way to answer this question is to cite Thomas Friedman, controversial it might be. He says that the world has become “flat.” **I take that to mean that thanks to rapid technological progress in ICT and transportation, the movement of factors of production is made increasingly free and rapid across international borders that the key driver of economic progress has shifted increasingly beyond the traditional roles of location-specific endowments to the role of knowledge.** Indeed, many leading scholars have recognized knowledge as another critical factor (in addition to land, labour, and capital) in a competitive economy. Thus it is not difficult to understand that “Education” -- to quote the beginning of the statement adopted by the heads of state and government of G8 member countries in St. Petersburg on July 16, 2006 – “is at the heart of human progress. Economic and social prosperity in the 21<sup>st</sup> century depend on the ability of nations to educate all members of their societies to be prepared to thrive in rapidly changing world.”

**It follows therefore that the challenge that all countries now face in order to thrive in an increasingly globalized world is to promote all three elements of the so-called “knowledge triangle,” that is, education, research, and innovation.** However, one thing is clear that their education systems must become better in quality, equitable and accessible, more channels to resources, especially financial resources, and more relevant to the needs of a global knowledge-based economy.

Little wonder that “knowledge society” and “innovation society” have

become catch phrases, and it has been widely recognized that knowledge-based economies call for the development of innovative education systems and predictable, transparent, and consistent institutional frameworks which are effective in supporting research and development, protecting intellectual property rights, and providing incentives for innovation and entrepreneurship.

## Part II.

An innovative education system is without doubt a key and indispensable element in building an innovative society. The point here was never missed by Mr. Deng Xiaoping, the architect of the Chinese economic reforms and opening up programs. He said that “we would rather sacrifice a few percentage points of economic growth rate as well as other sector’s pain for the sake of education development,” and that “a political leader, who does not take education seriously, is not a mature one.” “I would like to be the logistic minister for Ministry of Education and Ministry of S&T.”

It is no coincidence that when China decided to embark on its ambitious program of market-oriented reforms with China’s feature. Chinese universities were reopened to students through nation-wide competitive entrance examinations in the late 1970s. In addition, a 1979 government document explicitly prescribed **our universities as the center for both teaching (important for knowledge society) and scientific research (important for innovative society)**. Viewed in this context, **Chinese universities -- not just basic education -- have been an integral part of our efforts to develop a national innovation system.**

Based on Deng’s vision, Chinese government has since then been consistent in its national policy to promote the full spectrum of education so that we could turn 1.3 billion people from human burden to human

resources. “Revitalizing China through education, science and technology” has consistently been our long-term national policy. Under the new leadership of President Hu Jintao, who says that “education is a glorious cause that will shape the future of our nation,” the Chinese government has reinforced the national policy by emphasizing *innovation* to invigorate the country.

Policies need to address the challenges in a society. However, how to turn these ideal strategies into concrete policies and programs? More challengeable, how to translate policies into reality? When China stepped into the 1990s, new challenges were emerging. I hereby list a few as follows: 1. higher education progress have difficulty in providing quality and quantity talents to meet the demand of rapid economic growth; 2. population growth and demographic change add new pressure on higher educational development; 3. with the fast economic growth, strong need for the competence and capability of hi-tech, R&D is growing; 4. with social transformation, the demand for higher education is growing as academic degrees and credentials are becoming more important for career development and more people view education as investment; economic progress also makes people affordable for quality higher education.

To address these challenges, we are in constant thought and debate, not just how to cope with this situation, but how to be proactive to meet the challenges of this new century, and how to restructure our educational system up to the requirement of a knowledge-based society so as to build research and innovative universities?

Here, I’d like to share with you some of China’s policy choices and practices as follows:

1. Universalizing 9-year compulsory education and strengthening vocational education. By the end of 2000, China has basically

universalized compulsory basic education. The number of school students reached 250 million. The priority now is shifted on rural, western and ethnic minority areas so that compulsory basic education could be fully universalized by 2010, with the support of some new policies like totally free 9-year compulsory education. In vocational education, the students enrolled in ordinary secondary schools are the same scale of those enrolled in vocational schools.

2. To cope with the fast growing demand for tertiary education, the strategy of dual track system is employed. One track is mainly dealing with the mass demand of tertiary education. System reform has been carried out to decentralize the majority of public universities, meanwhile promote private tertiary education institutions. About 80% of public universities are decentralized to provincial. Law on promoting private education was adopted to guarantee private education institutions have the equal status and enjoy same policies. Meanwhile, cost-sharing system, student loan and scholarship mechanism etc. are also developed. With these reforms, the number of students studying in universities has increased from 6 million in 1998, lower than India, to 13 million in 2003, close to that of then US, and 23 million in 2006, the largest student body in the world. The enrolment rate has increased from 9% to 23%.

3. Another track is to concentrate limited central government resources to develop research and innovative universities by system restructuring, merging, collaborating and joint-building universities. By 2002, 637 universities were merged to create 270 comprehensive or multi-disciplinary and research oriented universities. It was a huge restructure, painful yet swift, so as to prepare them compete on the equal footing globally. Resources have been largely allocated through such programs as Project of building 100 top universities for the 21<sup>st</sup> century and Programme May 1998 for building a number of world class universities. Those universities will be ready to take the lead in building

innovative society.

4. In order to strengthen the research capacity of universities, one way is to build science parks and incubators so as to encourage the transfer of research results commercially. So far, more than 80 science parks were built in our universities. Of course, due to historical reasons, many research institutes have their strengths. However, research for universities have several unique advantages. One is inter-disciplinary research approach supported by basic science studies, which is very often interest driven, instead of project driven. Secondly, universities' nature of flow of students is something like a running river of talents, while research institutes are more like a reservoir for the talents, on top of that the grouping of faculty and staff for research and start-up ventures. Thirdly, the academic freedom and the campus culture are more favourable for research and innovation.

In recent years, as the development challenges under conditions of globalization have proven overwhelming for governments alone, they have sought to reach out to the other partners in each area of the “triangle”. Worldwide, countries whose economies generally perform well have invested heavily in the “triangle”. Conversely, those which have done little or late to develop the triangle are falling further behind. The lesson is that basic education is necessary but not sufficient; the role of research universities must be emphasized. Currently, there are many good examples of triangular synergy and cluster whose development is driven by the same logic but sensitive to local conditions.

Globalization and knowledge economy are challenges as well as opportunities. All countries in this world are facing similar situations: existing industry structure need to be restructured and upgraded; moving from lower end to higher end in industry chain for more value-added products. Unfortunately, this cycle is becoming shorter and shorter with

the deepening of globalization. That is why universities have a more important role to play.

But how can universities play such a role? How can a triangle be established and do function? China's practice suggests: 1. Forming consensus among all stakeholders involved is the pre-condition so as to have the willingness to commit, where government steer the catalyst; 2. Universities need to serve as the driving engine and the core force through preferably share-holding system.

I could explain these in the following examples.

Zhongguanchun in Beijing, known as the silicon valley in China is the place to look at for an illustration of the cluster effect of the synergy between the government, the universities and research institutes and the private sector. There, Peking University and Tsinghua University are the driver and incubator for innovation and entrepreneurship, and Beijing City plays a catalytic and supporting actor for international and regional exposure and cooperation. The Zhongguanchun Technology Park is home to thousands of companies. All the stakeholders at Zhongguanchun have come together to help and educate their students to identify and develop their high potential for every stage of the spiral chain of the innovation process. And together they have managed the structural transformation of the region with a common commitment to regional innovation. The result is that the region restructured from steel and chemical industries to the new Zhongguanchun whose economic development is based on IT, BT and NT. While in East part of Beijing, culture innovative industry is developing.

Similar cases can also be found in Shanghai. The Yangpu cluster area of universities. There, Fudan University and Tongji University serve as the driving engine of the so-called “三区联动”, which means government,

universities and industry as well as civil society, business. This turns out to be successful.

In North-East China, universities are playing an important role in supporting the transformation of old industrial structures there. North East University developed one of the best software parks in China. Dortmund, geographically speaking, is so far away North East China. And in some forms, due to different country context, might also vary. Nevertheless, the underline principle is surprisingly so similar.

### Part III.

Thus far, I have discussed the importance of education, higher education in particular, and the logic of the synergy between the government, universities, research institutes, and businesses in building an innovation society, and have cited several concrete country-level examples for illustrative purposes. By way of conclusion, however, **let me add a few comments on international partnerships with an eye on both equity and relevance to develop global innovation society.**

In the spirit of thinking globally and acting locally, I believe that North-South cooperation is justified by the need to share expertise and promote development on a more equitable basis; South-South cooperation is also necessary by the need to share and compare amongst countries of closer scale and conditions to stimulate true national ownership of the development process and to learn from relevant examples. Both approaches are valid and are complementary. Both are essential in the 21<sup>st</sup> century to deal with the sheer challenge of the development process and with the specific political, socio-economic and cultural aspects of each country. In both instances, we must build effective platforms of partnership to ensure the contribution of the various public, private, and academic stakeholders – countries, UN agencies of ITU, UNCTAD, FAO,



etc, major IGOs and NGOs, regional agencies and entities, national bodies as well as civil society organizations.

In this way, global issues are addressed to identify suitable local solutions. This is essential in the globalized world of the 21st century. This aspect is gaining importance as the current UN reform aims to focus on concrete locally-relevant action so as to make the UN – the global government – a reality for the lives of each citizen.

Many international organizations sitting here today, each has its own strength. UNESCO also has its unique competence and strength. N/S and S/S cooperation are suited to UNESCO's specific mandate as a laboratory of ideas and catalyst for international governmental cooperation. UNESCO is a “network of networks”. Its numerous networks are one of its major strengths. UNESCO must further regain this expertise.

**Overall, I believe this will generate a network of networks of social capital, from multilateral and international, regional, national to local levels to address development policies, issues and resources. In this way, global issues can be addressed by identifying suitable local solutions.** This is essential in the globalized world of 21<sup>st</sup> century, and will demonstrate that the 21<sup>st</sup> century can and should be a global learning and innovative society. That should not just for North and West, but also for South and East.

Thank you for your attention.