

4. EXCHANGE OF VIEWS ON EU-INDIA RELATIONS



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WORK EXPERIENCE

Ambassador to Belgium, Luxembourg and the European Union

(Assumed office in Brussels on 15 September, 2008)

Additional Secretary (Economic Relations), Ministry of External Affairs, New Delhi

(December 2007 – September 2008)

Responsibilities included Multilateral Economic Relations, Energy Security, Investment & Trade Promotion, International Development Cooperation Agency, functioning of Economic and Commercial Wings in all Indian Embassies and posts abroad, Coordination of work related to Climate Change.

Joint Secretary later Additional Secretary (Eurasia), Ministry of External Affairs, New Delhi

(May 2005 – December 2007)

Responsible for Russia, Ukraine, Central Asia and Caucasus countries. Shanghai Cooperation Organisation Trilateral Forum: India-China-Russia and BRIC grouping: Brazil, Russia, India and China.

Chief, Corporate Finance, WORLD BANK, Washington DC

(July 2002 – April 2005)

Responsible for financial oversight of the World Bank investment portfolios, funding, asset-liability management and related derivatives transactions. Concurrently responsible for market risk analysis and policy issues related to the World Bank's net worth.

Joint Secretary (Capital Markets, Pension Reforms and External Commercial Borrowings), Ministry of Finance, New Delhi

(June 1999 – June 2002)

Responsible for improving market integrity and implementing best practices in Indian bond, equity and derivatives' markets, and pension reforms.

WORLD BANK Treasury, Washington DC

(September 1991 – May 1999)

Head, Asset-Liability Management

(June 1998 – May 1999)

Responsible for pricing and executing hedging transactions (currency/interest swaps and futures/options and

other OTC and exchange traded derivatives as required) across International Bank for Reconstruction and Development's (IBRD) balance sheet and for assessment of risk to IBRD's net worth.

Lead Specialist - Derivatives

(June 1996 – May 1998)

Responsible for pricing/executing World Bank Treasury's OTC and exchange traded derivatives transactions.

Principal Financial officer, Funding Department

(June 1995 – May 1996)

Responsible for World Bank's structured bond funding (i.e. with embedded options to cater to interest rate, currency, equity risk preferences of investors) and its buy-back and liquidity facility.

Senior Financial Officer, Funding Department

(June 1993 – May 1995)

Financial Officer, Treasury Technical Assistance

(Sep 1991 – May 1993)

Ministry of External Affairs (MEA), Embassy of India Madrid, Embassy of India Havana, Department of Atomic Energy, Mumbai

(July 1976 – August 1988)

Deputy Secretary (USA and Canada), MEA, New Delhi

Deputy Secretary, Department of Atomic Energy, Mumbai

First Secretary, Charge d'Affaires, Embassy of India, Havana (Cuba)

Under Secretary (Bangladesh, Sri Lanka and Maldives) and Officer on Special Duty (External Press Relations), MEA, New Delhi

Third Secretary, Second Secretary Embassy of India, Madrid

EDUCATION

St. Columba's High School, New Delhi

MSc (Physics), St. Stephen's College, Delhi University

MS (Finance), Sloan School, Massachusetts Institute of Technology (MIT), USA

Ph.D. (Finance), Tufts University, USA

Executive Development Program, Harvard Business School, USA

Languages: Assamese - Mother Tongue

Hindi - Fluent

English - Fluent

Spanish - Fluent

Publications: Chapters in several books on Financial Markets.

Regular columnist in BUSINESS STANDARD (a leading Indian financial daily newspaper).

Brussels, 26 June 2009

EU-India Troika to set an ambitious agenda for the next EU-India Summit

On 29 June 2009, Commissioner for External Relations and European Neighbourhood Policy, Benita Ferrero-Waldner, will participate in the EU-India Foreign Ministers' Troika in Prague. The meeting with the recently appointed Indian Foreign Minister, S.M. Krishna, is expected to put emphasis on a range of global issues, particularly on common strategies and responses to the economic and financial crisis. Furthermore the high level meeting will discuss cooperation in the field of energy and climate change and how both partners can reinforce their ambition to achieve concrete progress at the December Copenhagen conference. Other topics will include the fight against terrorism and recent foreign policy developments in the region.

Prior to the meeting, Commissioner Ferrero-Waldner said: "This EU-India Foreign Ministers Troika is timely as the EU and India must join efforts to confront global issues and regional challenges. This is even more pertinent at a time when a rapidly changing international environment requires more intensive engagement and political dialogue. After the Indian legislative elections, 2009 is a crucial year for the EU and India, two natural partners, to find ways to address common challenges posed by climate change, energy security or terrorism. I am pleased that we have already been able to establish very good cooperation with India covering many issues, notably our very valuable cooperation in the area of Research and Development linked in particular to the field of renewable energy such as solar energy for example. Furthermore, we work together closely on education and the success of the Erasmus Mundus Programme with India for instance is very encouraging and offers many valuable opportunities to both Indian and European youth."

The EU-India Foreign Ministers' Troika will set the scene for the annual EU-India Summit, scheduled for the second semester in New Delhi, which will focus mainly on climate change, trade relations, energy and security.

Background

The Joint Action Plan adopted in 2005 is the most tangible expression of the EU-India Strategic Partnership launched in 2004. It has significantly reinforced bilateral relations between the EU and India in a wide range of sectors. Reviewed in 2008 to better reflect the major challenges facing the world today, it aims at reinforcing cooperation to better promote peace and comprehensive security, sustainable development, research and development, as well as people-to-people contacts and cultural exchanges.

For more information:

http://ec.europa.eu/external_relations/india/index_en.htm

EU-INDIA SUMMIT
Marseille, 29 September 2008

Global partners for global challenges:

The EU-India Joint Action Plan (JAP)

The EU-India Joint Action Plan (JAP) has now been working for three years. It has provided an agreed measure of progress, a mechanism for coordination and a spur to stronger cooperation.

The period since its adoption has been marked by worldwide growth of interdependence. Climate change, terrorism and instability remain as much of a threat as in 2005 and new challenges have arisen. The unprecedented pressure on energy and natural resources, including foodstuffs, poses new difficulties and calls for immediate action, as well as long-term structural measures.

In light of these challenges, and on the basis of the shared values expressed in the 2005 JAP, the EU and India will build on the achievements of the past three years and ensure further progress in the coming period.

I. REVIEW

1. Political dialogue and cooperation have been strengthened

Better political cooperation between the EU and India has been a notable achievement. Existing channels for dialogue have been consolidated since 2005, with a regular calendar of Summits, ministerial meetings, and expert level meetings on subjects such as human rights and consular issues. In addition, new channels have been established, such as the annual security dialogue. New formats for dialogue have also been created through Indian membership of ASEM and EU observer status at SAARC. The EU and India have also pursued issues of common concern within the framework of the United Nations including peacekeeping & peacebuilding. In so far as cooperation between Europol and the CBI is concerned, it needs yet to be activated. The European and Indian Parliaments now have special delegations for promoting bilateral parliamentary relations.

2. Trade, investment and economic policy dialogue have expanded

In the last five years, trade has more than doubled, and bilateral investment has increased ten-fold. The parties launched negotiations for a bilateral trade and investment agreement in 2007. In specific policy dialogues on trade and investment, more progress has to be made.

New dialogues have been created on macroeconomic policy and on financial services, which underline the importance of financial and monetary stability, and of inclusive growth, in particular in the context of price rises associated with food, basic metals and energy.

3. Scientific and technical co-operation has developed

An EU-India Energy Panel has been established. The International Thermonuclear Experimental Reactor (ITER) Agreement, to which both India and the EU are parties, has come into force. Science and technology activities have intensified and exchanges have been elevated to ministerial level, with increased co-operation across the board, shared partnerships with co-investment in research and technology development, and the renewal of the EU-India Science and Technology Agreement.

Co-operation on information and communications technologies continues to be strengthened, as indicated by the connection of the European high speed research network GEANT2 with its Indian counterpart ERNET, allowing European and Indian researchers to develop joint projects. The area of transport will benefit from the signature of a horizontal aviation agreement.

Co-operation and exchanges on pharmaceuticals and biotechnology have provided a better understanding of the complex issues in the sector. The two sides have made progress towards validating Ayurveda products as para-medicines or food supplements. In the field of employment and social affairs, there have been substantial activities under the sector policy dialogue and associated work programme.

Clean development and climate change needs more concrete activities involving all stakeholders. The maritime agreement discussions are yet to come to fruition. In space technology, dialogue between the two sides needs to be further strengthened. In global navigation satellite systems, the EU-India agreement on Galileo has yet to be finalised.

4. Cultural and people-to-people links have deepened

Specific funding has been made available to increase the participation of Indian students in European graduate programmes. The Community Culture Programme has launched a special action for EU-India cultural co-operation for the period 2007-2009. Work continues on promoting civil society exchanges and people-to-people interaction in diverse fields. There is a need for more progress in the area of

culture and in the shared ambition of establishing chairs of study in both partners' academic institutions. Further effort is needed to facilitate the movement of persons, based on a comprehensive approach to migration issues.

II. NEW ACTIVITIES

The EU and India identified the following new activities to complement the 2005 India-EU Joint Action Plan, with the objective of promoting international peace and security and working together towards achieving economic progress, prosperity and sustainable development:

1. PROMOTING PEACE AND COMPREHENSIVE SECURITY

- To strengthen their consultations in the United Nations Human Rights Council and sustain their dialogue on human rights with a view to promoting the universality of human rights.
- To organise seminars and exchange best practice on civil-military peace building issues, including on Africa.
- To reinforce co-operation in fighting proliferation and in export control.
- To intensify contacts in the fight against terrorism including through the operationalisation of co-operation between Europol and India.
- To co-operate on regional issues.
- To join efforts in the international fora in using expertise in global development policy to promote the achievement of the MDGs and aid effectiveness.

2. PROMOTING SUSTAINABLE DEVELOPMENT

- To implement a bilateral Work Programme on Energy, Clean Development and Climate Change to promote joint activities, research and policy development.
- To explore the up-scaling of financing for activities to address climate change and further explore the potential for research and technology co-operation and the options for technology transfer.

- To foster co-operation on solar energy with a view to jointly developing a flagship programme in solar energy.
- To make substantive and efficient progress for the early conclusion of an ambitious and balanced broad-based trade and investment agreement.
- To strengthen the exchange of best practices and co-operation in customs matters, covering areas such as supply chain security and trade facilitation, customs Intellectual Property Rights enforcement, environmental protection, tackling commercial fraud, modernisation of processes, of procedures and of working methods.
- To share experience, views, and non-confidential information on competition law policy and enforcement.
- To use the EU-India regulatory dialogue on financial services launched in 2006 to make progress on regulatory convergence.
- To establish a Working Group on engineering sector including automotive industry; a dialogue on sustainable industrial policy; and the strengthening of co-operation on the small and medium-sized enterprises (SME) sector.
- To develop business-to-business and research co-operation with the help of the future European Business & Technology Centre (EBTC).
- To extend the current dialogue on agriculture to address agricultural productivity, including new technologies, input use efficiency, and improved selection of seeds and crops.
- To enhance technical and regulatory co-operation in the field of civil aviation, spanning such areas as aviation safety, aviation security, environment, air traffic management, economic regulation and business issues.
- To further co-operate in the field of decent work.
- To increase exchanges in the fields of sustainable extension of social protection, social dialogue, equal opportunities and gender equality.
- To launch a joint study on decent work covering priority areas relating to global employment, social cohesion, and sustainable development.
- To conduct a dialogue on issues relevant to co-operation with third countries.

3. PROMOTING RESEARCH AND TECHNOLOGY

- To co-operate in civil nuclear research and development in a manner consistent with their international obligations.
- To enhance co-operation in the framework of the International Thermonuclear Experimental Reactor (ITER) Agreement and through the conclusion of a bilateral agreement between Euratom and India in the field of fusion energy research.
- To create links and to increase exchanges between both sides' statistical services to foster co-ordination in statistical methodology and research on social and economic data.
- To undertake collaborative research and capacity building in new fields of science and technology, which will be determined by the Steering Committee of the EC-India S&T agreement.
- To strengthen dialogue between the Indian Space Research Organisation (ISRO), the Department of Space (DOS), the European Space Agency (ESA), and the European Commission.
- To explore co-operation in the field of Pharmaceutical Education and Research.

4. PROMOTING PEOPLE-TO-PEOPLE AND CULTURAL EXCHANGES

- To strengthen dialogue between the two Parliaments.
- To continue the promotion of civil society exchanges and interaction through the reinforcement of the mandate of the EU-India Civil Society Roundtable in order to ensure greater involvement of economic and social partners, especially trade unions, farmers, consumers and business associations.
- To improve co-operation and foster greater linkages between European and Indian higher education institutions.
- To promote the development of European Union Study Centres in India and Modern Indian Study Centres in the EU.

- To increase exchanges of students and academics, *inter alia*, by offering masters and doctoral-level scholarships and a wide range of opportunities for academic co-operation through the second phase of EU's Erasmus Mundus External Co-operation Window.
- To explore the possibility to train teachers in view of the setting up of a large number of national level educational institutions and central universities in the Eleventh Five-Year Plan in India.
- To disseminate tools and good practices regarding transparency, transferability and mutual recognition of qualifications.
- To promote modernization of higher education and vocational training in the EU and in India with an emphasis on quality, openness, transparency and partnerships between academic and business communities to enhance innovation and employment.
- The EU and India take note of the work carried out by the International Center for Promotion of Enterprises (ICPE) within the UN framework to promote cooperation in areas of entrepreneurship and SME development, corporate governance, trade and knowledge-based society through research and consultancy.
- To engage further in intercultural dialogue building up on cultural diversity and multilingualism.
- To enhance cultural co-operation, in particular within the context of the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions.
- To promote the conservation and management of monuments and sites.
- To launch a dialogue in order to exchange information and expertise in the areas of education, training, culture and multilingualism.
- To use the EC indicative budget of €470 million for India for the period 2007-2013 in support of the health and education programmes of the Government of India and for the implementation of the Action Plan's initiatives.

JOINT DECLARATION

of

Mr Ján Figel'

**Commissioner for Education, Training, Culture and Youth
European Commission**

and

Shri Arjun Singh

**Minister for Human Resource Development
Government of India**

ON EDUCATION

JOINT DECLARATION
of
Mr. Ján Figel', Commissioner for Education, Training, Culture and Youth
European Commission

and

Shri Arjun Singh, Minister for Human Resource Development
Government of India

ON EDUCATION

The European Commission and the Government of India wish to reinforce co-operation and dialogue in the fields of education and training.

European Commissioner for Education, Training, Culture and Youth, Mr. Ján Figel', and Minister for Human Resource Development, Government of India, Shri Arjun Singh, declare their wish to strengthen co-operation and dialogue between the European Commission and the Government of India in the fields of education and training.

The European Commission and the Government of India acknowledge the crucial contribution of education and training to the development of knowledge-based societies and economies and the key role they play in boosting growth and employment.

Both sides furthermore recognise the long-standing context of their cooperation in education and training in line with:

- the Cooperation Agreement signed on 20 December 1993, in particular its provisions regarding human resource development and the promotion of cooperation between EU and Indian Higher education institutions (article 18),
- the EU-India Joint Declaration on Cultural Relations adopted on 3 November 2004 at the India-EU summit in The Hague,
- the 2005 EU-India Joint Action Plan supporting the Strategic Partnership,
- the Joint Statement issued at the EU-India Summit in New Delhi on 30 November 2007.

In this context, Commissioner Ján Figel' and Minister Arjun Singh recognise the positive outcome of the 2008 EU-India Summit in Marseille, and in particular the decision to develop a policy dialogue between the parties in the field of education.

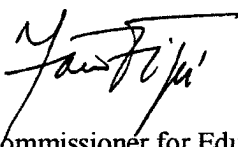
Commissioner Ján Figel' and Minister Arjun Singh stress the importance of promoting the use of existing instruments in order to foster academic mobility and to develop links between higher education institutions. They especially welcomed the success of a large number of Indian students and scholars who have received scholarships under the Erasmus Mundus programme and express their expectation that academic exchanges will be further reinforced through the newly-launched Erasmus Mundus External Cooperation Window (India Strand) and the second phase of Erasmus Mundus programme. They also look forward to the results of the India-EU Study Centres initiative. Both sides also expressed satisfaction with the EU's support to India's flagship programme for the universalisation of elementary education.

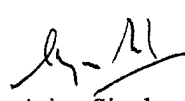
Taking into account these positive developments, Commissioner Ján Figel' and Minister Arjun Singh express their intent to take the following further actions:

- The European Commission and the Government of India, represented for this purpose by the Directorate General for Education and Culture on the one side, and by the Ministry of Human Resource Development on the other side, will set up a sectoral policy dialogue on education and training that may cover the following thematic areas:
 - the reforms agenda for higher education in order to respond to changes in society and to labour market needs at global level;
 - quality and equity in education, quality assurance mechanisms at all levels of education, and the participation of the stakeholders concerned including teachers and students;
 - academic excellence and cooperation with institutes such as the Indian Institutes of Technology and the European Institute of Innovation and Technology;
 - faculty and student mobility including mechanisms to promote it;
 - initial and continuing teacher education;
 - vocational education and training;
 - tools for the recognition of qualifications and periods of study, the transfer of learning outcomes at all levels of education including European Qualifications Framework (EQF) and European Credit Transfer and Accumulation System (ECTS), promoting the transparency and transferability of qualifications;
 - lifelong learning policies, particularly the acquisition of basic and new skills, e-learning policies, use of ICT in schools, second chance education for adults and inclusive education for the disadvantaged groups.
- The sectoral policy dialogue will consist of regular exchanges of best practices, sharing information on policy developments and challenges, and the promotion of knowledge-building and sharing in relation to the commonly identified issues. It will also include discussions on existing and future co-operation. Specific events such as seminars, workshops or expert meetings will be jointly organised for the purpose of those exchanges and discussions, with the participation of relevant stakeholders. These events could be held annually, alternately in Brussels and in New Delhi or in any other venue agreed by both sides.
- Both sides will jointly set up a rolling work programme for conducting this sectoral policy dialogue. They will regularly review its implementation and discuss avenues for future co-operation. To this end, senior officials from both sides led by the Director General (Education & Culture) of the European Commission and the Secretary, Department of Higher Education, of the Government of India, will meet in principle once a year at alternating venues. Other occasional meetings may be held as necessary.
- Both sides will bear their own delegation's costs of participation in such events and meetings. All other costs linked to the organisation of these seminars, workshops and meetings will be borne by the side hosting the event, except if agreed otherwise.

The provisions of this Joint Declaration express the intent and are not designed to create legal rights or obligations under international law.

Done in New Delhi on the 12th of November 2008.


 Jan Figel
 European Commissioner for Education,
 Training, Culture and Youth


 Arjun Singh
 Minister for Human Resource Development
 Republic of India

Perspectives on EU–India Relations

CEPS Working Document No. 253/October 2006

Feng Geng

(Summary in English, main text in Chinese)

Abstract

Since the 1990s, relations between the EU and India have developed rapidly. Nowadays, EU–India relations have a strong institutional architecture, including regular summits (political and commercial), meetings of ministers and senior officials and so on. Within this institutional framework, the EU and India have launched a comprehensive and fruitful cooperation. There is much active political collaboration, such as in the reform of the United Nations and the fight against terrorism, based on common values. Trade and investment between the EU and India are experiencing strong growth but lack symmetry. What are the reasons behind the EU's drive to advance relations with India so quickly? This paper identifies a number of factors involved. It examines the EU's drive to deepen ties with potential economic powers, enhance its influence in the international community in general and avoid an overly dependent trade relationship with China. The author then assesses the potential impact of the EU's efforts to forge stronger relations with India from the perspectives of the EU and India, as well as the side effects for the EU's important trade partner, China.

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PERSPECTIVES ON EU–INDIA RELATIONS

FENG GENG*

(Summary of text in Chinese)

Since the 1960s, there have been five stages in the evolution of relations between Europe and India, as outlined below:

- In 1963 diplomatic relations were established between India and the European Economic Community (EEC).
- During the 1970s, the Commercial Cooperation Agreement launched bilateral economic ties between India and the EEC.
- The 1980s saw a deepening of economic relations through the five-year Commercial and Economic Cooperation Agreement and its subsequent renewal.
- In the 1990s, the Partnership and Development Cooperation Agreement went beyond economic ties towards building relations centred on partnership. The European Commission's Communication on An EU–India Enhanced Partnership¹ is another important document reflecting relations at this stage.
- As the 21st century began, the first-ever EU–India Summit was held in 2000. Four years later, the EU and India decided to forge a comprehensive, strategic partnership.

Nowadays, EU–India relations have a strong institutional architecture, including regular summits (political and commercial), meetings of ministers and senior officials and so on. Within this institutional framework, the EU and India have launched a comprehensive and fruitful cooperation. There is much active political collaboration, such as in the reform of the United Nations and the fight against terrorism, based on common values. Trade and investment between the EU and India are rapidly increasing but lack symmetry.

What are the reasons behind the EU's drive to progress relations with India so quickly? This paper argues that there are four factors involved.

First, there is a natural desire for the EU to extend its relations given its own development and expansion. Today, the EU's 25 states cover an area of 3,973,000 square kilometres and a population of 459.5 million. The EU is the largest economic entity in the world – even more so than the US. At the same time, the EU's society is more stable than that in other regions. The prosperity and stability of its interior result in the motivation to have greater influence on international affairs. Thus the EU must develop a closer partnership with the major powers or potential powers of the world. India is just one of these powers. Since the reforms of the 1990s, the size of the Indian economy has grown to €771.95 billion in 2005, ranking 11th in the world, with annual average GDP rising at a rate of more than 6%.² Considering its huge size, its population of more than a billion and its important geographical location, India has the possibility to become a powerful actor in the future. Therefore it is natural, reasonable and sensible that the EU enhances its relations with India.

* Feng Geng is a PhD candidate at the China Institutes of Contemporary International Relations (CICIR) and a Visiting Fellow at CEPS. The views contained in this paper are those of the author only.

¹ See European Commission, Communication on An EU–India Enhanced Partnership, COM(96) 275 final, Brussels, 26 June 1996.

² See International Monetary Fund, World Economic Outlook Database, World Economic and Financial Surveys, IMF, Washington, D.C., 14 September 2006 (retrieved from <http://www.imf.org/external/pubs/ft/weo/2006/02/data/weoselser.aspx?a=&c=534&t=1>).

Second, there is a big prospective market in India. Although India has an enormous population, the EU's trade with India only comprises 1.8%³ of the total trade between the EU and the rest of the world. Also, the share of the service trade with India is very low, at only 1.1%⁴ of the EU's total. There should be a very broad space to develop trade relations with India. The situation for investment in India is similar. In 2004, FDI investment flows into India only totalled €1.1 billion, a figure that reflects a mere 0.9%⁵ of the EU's entire FDI outflows. Furthermore, the construction of basic infrastructure in India is occurring on a vast scale, which urgently needs investment, equipment and technology. Meanwhile, India's defence budget has risen sharply in recent years as well as the level and scale of its weapons purchase. India has been buying a great deal of weapons from European firms in France and Germany for example, which has been a source of significant income to these countries. Finally yet importantly is the field of high technology. In this regard, there is strong demand in India, as for example the boom in its aviation sector has resulted in the need for aircraft and thus opportunities for the French firm Airbus. India's intentions to advance its technology are also evident in the agreement about India's participation in the EU's Galileo project, which will bring major benefits to the EU in all aspects.

Third, there is the American factor, which features two opposing trends. One is that the orientation of American foreign policy towards India influences the orientation of EU policy. As US-India relations grow closer, so too do EU-India relations. Two cases in point are the EU's initiative to hold a summit with India and the subsequent forging of a strategic partnership, and the issue of a joint declaration for the development of civil, nuclear energy cooperation. All these activities came on the heels of steps taken by the US. In this sense, the EU is following the US. But that is not the whole story. In fact, the EU has its own purposes in strengthening ties with India. The American tendency towards unilateralism has forced the EU to seek more partners to counter this situation. In this sense, the EU has been deviating from the US. How did these contradictory trends arise? This paper holds that it reflects the inherent contradiction of EU-US relations. On the one hand, the EU and the US are joint stakeholders with regard to economic, political and security matters. In many cases, the EU has to be in accord with the US because the US more powerful, especially in the military field. On the other hand, these two actors have different opinions about the future structure of the world. The EU wants to solidify and enhance its influence on the international community, as it seeks a multipolar world, while the US envisages the opposite.

Finally, there is the Chinese factor. This factor also has two aspects. Balancing the influence of China in Asia is the first of these. China's ideology and regime are different from that of Western countries. Unfortunately, the EU gives much attention and emphasis to this point. Thus, there is a perception that a strong, democratic India is the best way to balance China. Avoiding the risks of the EU's over-dependence on China in trade and economic affairs is the second aspect. Trade and economic relations between the EU and China are very close. The EU is the most significant trade partner to China and China is the second-most important trade partner to the EU. In 2005, 30.65%⁶ of the EU's textile and clothing imports came from China. Changes in Chinese domestic affairs or in EU-China relations are likely to have a marked impact on the EU. Under the heading of 'don't put all your eggs into one basket', it can be surmised that 'made in India' is the best substitute for 'made in China' in terms of goods that are low cost, exhibit good design, have high investment efficiency and so on.

The development of EU-India relations is influential on four levels. On the first level, EU-India relations can promote progress for both sides, including economic prosperity and the elevation

³ See Eurostat (Comext, Statistical regime 4).

⁴ Ibid. (excluding government service).

⁵ See the European Commission's website article, "Bilateral Trade Relations with India", Brussels, October 2006, (retrieved from http://ec.europa.eu/trade/issues/bilateral/countries/india/index_en.htm)

⁶ Eurostat (Comext, Statistical Regime 4).

of international positions. On a second level, the strengthening of EU–India relations is helpful to the stability and development of the respective regions. India supports the enlargement of the EU and the EU undertakes efforts to support peace in southern Asia. Moreover, their joint work to fight terrorism facilitates the respective regions' security and stability. On a third level there is the beneficial creation of new international structures. The EU and India have common views on international structures in the future, being that they should be in a multipolar and not in a unipolar world. The EU is helping India to advance; as it does so, India can contribute more to this process. At the same time, EU–India cooperation in the framework of the World Trade Organisation also helps the development and improvement of the multilateral trade system.

On a further level, concerning the impact of EU–India relations on China, as a popular saying goes, 'every coin has two sides'. There are two different kinds of influences related to China – positive and negative. On one side, the development of EU–India relations is in line with Chinese interests. Today, China is evolving at a rapid pace and the most important thing for China is a peaceful international context. The progression of relations between the EU and India is helpful to regional as well as world peace and stability. In this sense, China welcomes the process. On the other side of the coin, advances in the ties between the EU and India will have some negative side effects on China in the future. At first, India will have a greater share of the FDI flowing from the EU, affecting trade between the EU and China, especially in manufactured products. These issues will become increasingly serious for China with the growth of the Indian economy. Furthermore, there are some major potential problems in relations between India and China in the longer term:

- 1) *Territorial disputes.* India and China engaged in a territorial war in 1962. The national boundaries between China and India have yet to be confirmed.
- 2) *The partnership between Pakistan and China.* China is an 'all-weather' partner for Pakistan. Whenever conflicts erupt between India and Pakistan, China always stands with Pakistan. Naturally, New Delhi does not enjoy that.
- 3) *Sea transportation lines for oil imports into China – the Indian Ocean and the Malacca Straits.* The Malacca Straits and the Indian Ocean are the most important transportation routes for oil imports from the Middle East and Africa to China. About 80% of imported oil must be transported to China through this 'life line'. As we all know, these areas are mainly controlled by India. If disputes between India and China occur, the high degree of Chinese dependency on these transportation routes would put China at a disadvantage.
- 4) *'The eastward strategy' of India to develop closer military ties with Japan and the Southeast Asian nations.* There are very complex historical problems between China and Japan. Tokyo's denial of guilt in the treatment of ordinary Chinese people by Japanese militarists during World War II causes further deterioration in the relations between China and Japan. In this context, it is understandable that Beijing is wary of the development of relations between India and Japan. There are also some intractable issues between Southeast Asian nations and China, such as territorial disputes in the South China Sea. It should be noted that Japan and the Southeast Asian nations do not belong to the traditional, strategic domain of India. So India's eastward strategy seems more like some kind of tactic for surrounding China.

Moreover, these potential problems will become increasingly grave with the EU's growing support of India, especially in the military and political fields. The sale of advanced weapons to India – which have never been sold to China – and the EU's firm political support of India during its conflicts with Pakistan will make India stronger and more resilient. There is no doubt that these trends are not of benefit to the future of China.

China and India: Implications for the EU Economy

CEPS Working Document No. 280/January 2008

Daniel Gros

Abstract

This paper provides background information on the likely challenges the rise of China and India will pose for the economy of the EU. The purpose is mainly descriptive, namely to spell out what kind of trading partner China and India will represent for the EU in the foreseeable future. A first observation is that India is several times smaller than China in economic terms. Moreover, because its investment rates in both human and physical capital are much lower than in China, its growth potential is likely to remain more limited.

China already now exports more manufacturing goods than all other emerging markets together. But its export structure is also evolving rapidly and has become rather similar to that of advanced economies like the EU. This 'convergence' is likely the result of a very rapid accumulation of human and especially physical capital. If current trends continue, China will have a capital/labour ratio similar to that of the EU by the end of the next decade. In terms of human capital, China has already caught up considerably, but further progress will be slowed down by its stable demographics and the still low enrolment ratio in tertiary education. In both areas, India lags China by several decades.

The rapid accumulation of capital suggests that the emergence of China will put adjustment pressures mainly on capital-intensive industries, not the traditional sectors, such as textiles. Another source of friction that is likely to emerge derives from the abundance of coal in China, resulting in a relatively carbon- and energy-intensive economy.

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CHINA AND INDIA:

IMPLICATIONS FOR THE EU ECONOMY

CEPS WORKING DOCUMENT No. 280/JANUARY 2008

DANIEL GROS^{*}

1. Introduction: China's place in the global economy

China and India are often mentioned in one breath as representing similar challenges for the EU (and indeed all OECD countries). However, the scale of the challenge from each of these two economies is not comparable. In terms of the sheer size of the trade and investment flows the differences dwarf the similarities, as shown in Table 1 below. At current prices and exchange rates, the GDP of China is about twice that of India, and China exports 9 times as much goods and still almost twice as much services. In terms of inward FDI, China is more than ten times bigger than India.

Table 1. China and India: Comparing size (\$ billion)

	GDP		Trade (exports)		Inward
	Current	PPP	Goods	Services	FDI
China	2,600	5,000	970	92	78
India	850	2,500	120	56	7
EU 27	13,000	13,700	1330	192	

Sources: WEO database, Eurostat and International Comparison Programme (ICP) (2007) of the World Bank.

The raw data on the size of China and India in economic terms suggest that China on its own is large enough to have a strong impact on the global economy (and on the EU), whereas India might constitute an important actor in some niche sectors (services trade, especially software). Being an order of magnitude smaller than China in economic terms (especially overall trade), however, it is not large enough to have, on its own, a noticeable impact on the global or the EU economy. This paper will thus concentrate mainly on China.

Another reason to concentrate on China is that it is the only country that can have a truly systemic impact on the global economy. Indeed, as Table 2 below shows, China alone accounts for about one-half of all manufacturing exports by emerging market economies. The other members of the so-called 'BRIC' group (Brazil, Russia, India and China) are each ten times smaller (in terms of manufacturing exports) than China.

We first provide some rough numbers on today's trade structure as well as the upgrading of the human and physical capital stock in China. These numbers suggest that the current differences in capital/labour ratios will disappear rapidly and that trade between the EU and China will thus become intra-industry in nature. Given that capital will most probably continue to be underpriced in China, it is even likely that future trade disputes will arise more frequently in those sectors characterised by both high capital intensity and economies of scale (steel, cars, ships, etc.), rather than in the 'old' labour-intensive sectors (textiles). Japan and Korea experienced similar shifts in their export structure earlier last century.

^{*} Daniel Gros is Director of CEPS. This paper was first prepared as a background note for circulation at a CEPS membership meeting on 15 January 2008, devoted to "Assessing Globalisation: What do China and India mean for the EU and the US?".

Table 2 The top exporters (of manufacturing goods) among emerging economies

	\$ billion	As a % of total
China (+Hong Kong)	\$999	48.3
Mexico	\$168	8.1
Malaysia	\$109	5.2
Thailand	\$87	4.2
Russia	\$78	3.8
India	\$75	3.6
Brazil	\$67	3.2
Total emerging markets	\$2,070.92	100.0

China's evolving trade patterns

It is by now widely accepted that an expansion of trade among similar economies causes few problems because it is likely to be intra-industry in nature and thus does not displace entire industries or large groups of workers (e.g. the low-skilled). One of the key questions about the rapid rise of China as a trading economy is thus what kind of trade will expand between China and the EU: inter-industry (China exports textiles against machinery) or intra-industry (two-way exchange of highly differentiated varieties of machinery and other manufactured products)?

The available data suggest that China has already moved a long way towards the second paradigm, as can be seen from the evolution of the structure of Chinese exports reported in Table 3 below. The share of machinery (plus transport equipment) has more than doubled over the last decade, going from 21 to over 47% and is now already higher than that of the EU (44.4%).

Table 3. A comparison of the structure of Chinese and EU trade (exports) (%)

SITC Category	China		EU
	1995	2006	2005
Food + beverages (0+1+4)	7.9	2.8	5.1
Minerals + fuels (2+3)	6.5	2.6	5.8
Chemicals (5)	6.1	4.5	14.7
Manufactures by material (6)	22.1	18.2	14.1
Machinery, transport (7)	21.0	47.2	44.4
Miscellaneous (8)	36.1	24.5	11.1

Source: UN trade statistics.

The composition of China's exports has thus changed rapidly over the last 10 years and is already now rather close to that of the EU. Since the structure of China's imports is also somewhat different however from that of the EU (more imports of machinery, for example), it remains true so far that China retains a comparative advantage in 'traditional' sectors, such as Textiles (contained in SITC (6)) and Miscellaneous (SITC (8) including toys, etc.), whereas the strongest sector for the EU is still machinery and transport equipment. A key question for the future is thus whether China will be able to continue the rapid shift away from traditional sectors. China's relatively rapidly changing and rather advanced trade structure provides another point on which China and India diverge. This is documented more in detail in the annex, which compares China's and India's export structures.

This paper does not deal with the frictions created by the large (and growing) trade surplus of China. There is an abundant literature on this issue and the longer-term considerations that follow will be relevant regardless of what happens to the overall Chinese trade surplus (or the bilateral one with the EU).

In assessing the likely future challenges of the rise of China for the EU, it might be useful to start from current perceived policy issues, pre-eminent of which is the 'cheap labour' problem.

2. Yesterday's policy issues: Cheap labour?

A first policy issue concerns the composition of Chinese exports. Policy-makers seem still to be under the impression (correct until recently) that imports from China are likely to threaten mainly labour-intensive industries, such as clothing. Given the extremely high investment rates in China, however, this is likely to change rather quickly. The present large difference in capital/labour ratios is already shrinking rapidly and on current trends most of the difference is destined to disappear within the next decade, implying that the composition of Chinese exports should shift quickly as well.

The key fact that dominates the evolution of the capital/labour ratio in China is the very high Chinese investment rate. While there is some debate over the measurement of the denominator (GDP), it is generally agreed that China invests more than 40% of its GDP (against about 20% for the EU and 25 % for India). This must be the starting point in any assessment of this issue. Recent results from the International Comparison Program of the World Bank has shown that China's GDP at PPP has previously been overestimated, but even the new results suggest that it is around 40% that of the EU, if measured at PPP. (However, at current prices and exchange rates, the EU's GDP is five times larger.) Given the much higher investment ratio, the net result is that, if measured at PPP, total investment in China is similar in size to that of the EU. According to the World Bank's 2005 International Comparison Program (ICP) "Global Report":

"The US accounts for the largest share of the world's expenditure for investment, but at 21 percent, it is closely followed by China with 18 percent. The 10 largest economies account for over more than two thirds of the world's investment. The share of investment in low and middle income economies is larger when world shares of investment are measured in PPP terms."¹

FDI plays only a minor part in determining the overall resources devoted to investment since total FDI inflows represent around 10% of all investment in China. The importance of FDI for China is thus not the amount of capital invested, but the transfer of technology that it brings about.

Another reason why the capital stock is increasing much more quickly in China than in the EU is that the starting level of the capital stock in China is still much lower than in the EU. This implies that depreciation is much lower. In the EU, the (net) capital stock is increasing only slowly because most investment just makes up for depreciation, whereas the opposite is true in China.

Tables 4 and 5 below contain some of the basic data that allow one to calculate the evolution of the capital/labour ratios in Europe and China. The GDP of China is about 40% that of the EU if measured at PPP, but with the investment ratios at 20% and 44%, respectively, this means that in absolute terms (annual) investment in China is actually of a similar size as that of the EU.

¹ See <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21589281~menuPK:34463~pagePK:34370~piPK:34424~theSitePK:4607,00.html>.

One key question is the size of the labour force over which capital is spread in China. According to official statistics, total employment in China amounts to around 700 million, but only about one-half of this number is employed in the modern sector.² It is thus assumed here that the capital stock is used mainly in the modern sector, which employs about 350 million persons (against around 200 million for the EU).

Data on the capital stock in China are scarce. A recent study³ uses a variety of different methods and comes to the conclusion that the capital/output ratio is around 3.5. This would imply that today's capital stock should be worth around \$20 thousand billion against somewhat more than \$60 thousand billion for the EU (always at PPP).

Table 4. A comparison of Chinese and European capital stocks (\$ billion at ppp) (2006 data)

	GDP at PPP	Investment as % of GDP	Total investment	Capital stock	Labour force (millions)	
					Present	Future
China	5,500	44	2,420	19,250	350	450
EU	13,000	20	2,600	52,000	200	220

Source: Own calculations based on WEO and World Bank data.

Given these starting values for the major variables, one can calculate the evolution of the capital stock by making an additional assumption about the rate of depreciation (assumed here to be 4 % p.a.). The time horizon is 10 years over which it is also assumed that employment in the EU increases by about 10% (in line with the Lisbon objectives) and by 33% in China as the new generations coming into working age will probably be absorbed entirely by the modern sector. The 'modern' workforce of China would thus arrive after ten years at 450 million persons, about twice as large as that of the EU.

Given these assumptions, Table 5 reports the resulting capital/labour ratios. That of the EU remains constant as the small increase in the capital stock is just sufficient to keep the capital/labour ratio constant with the small increase in the workforce (the additional capital is just enough to equip the additional employment with the same amount of capital). However, the capital/labour ratio rises rapidly in China, from around 20% of that of the EU to over 70%. If China continues to keep its present high investment rate, it could thus have within a decade a capital/labour ratio similar to that of the EU (and the Chinese capital stock would be of a more recent vintage). At that point China should no longer specialise in labour-intensive goods.

Table 5. The Chinese capital/labour ratio in motion (thousands of USD/worker)

	Present	Future (2016)
China	55	191
EU27	260	260
India	38	48

Source: Own calculations based on World Bank data.

A key factor transforming the Chinese economy, and its likely trade pattern, is thus its extraordinary investment rate, which is more than twice that of the EU (or other OECD

² This can be deduced both from the employment statistics by sectors (agriculture accounts for about 50% of employment) and the statistics by work place (about 50% are in rural regions).

³ Kui-Wai Li (2003), "China's Capital and Productivity Measurement Using Financial Resources", Economic Growth Center Discussion Paper 851, Yale University, New Haven, CT.

countries) and higher even than those of Japan and Korea during their respective high-growth periods (the peak for Japan was 36 % of GDP, just before the bubble burst). This implies that by the end of the next decade China could already have essentially caught up with Europe in terms of its capital/labour ratio.

India by contrast has a much lower investment ratio. Using the same approach for that country yields the result reported in the last row of Table 4: India's capital/labour ratio does not increase greatly because its investment rate is much lower and employment in the modern sector will (hopefully) increase by much more.

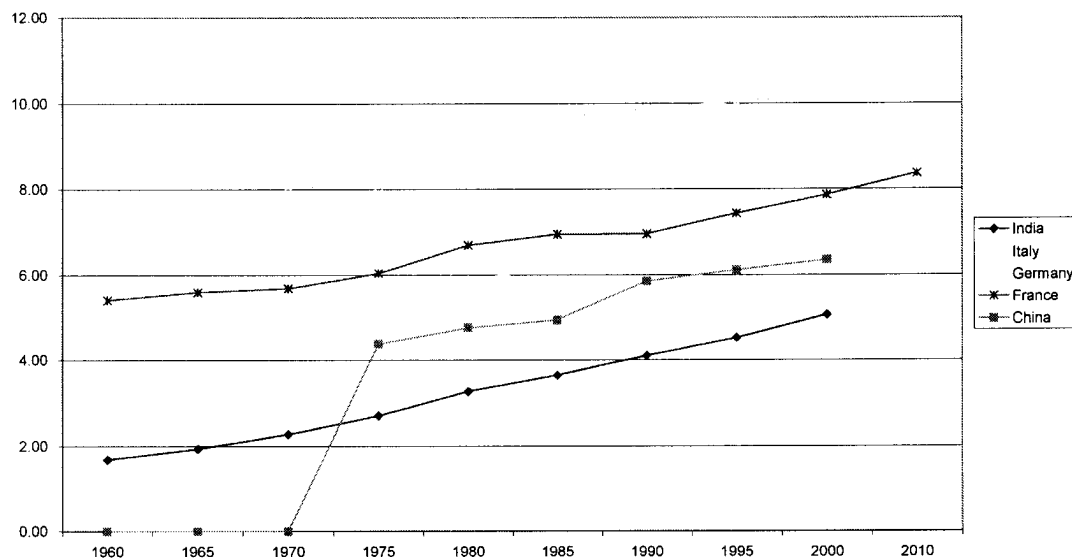
3. Human capital: China a global player in R&D?

While the current policy concerns focus on cheap labour, there have been a number of press reports suggesting that China is rapidly catching up in terms of innovation activity. The raw data suggest, however, that concerns that China will take over the lead in innovation activity on a broad scale are exaggerated. Moreover, in this area the speed at which China can close the gap with the EU is limited by demographic factors. With a roughly constant population, the average stock of human capital per worker can change only gradually as better educated new generations replace the older ones. This is by definition a slow process.

One can observe that the evolution in the stock of human capital in China seems to already have a strong basis, which is being reinforced quite rapidly, but it will take some time before the Chinese workforce will contain a similar percentage at the highest levels of education as that of the EU (or other OECD countries). However, given the size of its population, China is starting to count on the global scale – even at the tertiary level of education. This will now be illustrated from two different angles: the present situation and the future evolution as foreshadowed by enrolment ratios.

Education in China today. One useful gauge of the overall stock of human capital in the workforce is the average years of education attained by members of the adult cohorts. Measured in this way, China has reached a respectable level, close to some member countries (such as France and Italy) and not far below the EU average, but it remains behind.

Figure 1. Basic human capital: Average years of schooling in Europe and China



Source: Barro Lee dataset.

The horizontal distance between two lines gives an idea of how much China is behind EU member countries. Between China and Italy the difference seems to be only about 10 years, but much more for France (and Germany). The data for 2010 provided for EU member countries are derived from Commission projections, which, in turn, are based on today's enrolment ratios. These projections, which are not available for China, indicate that the upgrading of the workforce will continue in the EU as well so that the difference between China and the EU will not diminish if the upgrading in China just continues at this historical pace. The next section provides some data that suggest that the speed of the catch up will indeed not increase radically in future as well.

Enrolment ratios. An indispensable input for R&D is a workforce with the appropriate level of education. Research and development is mostly undertaken by personnel with tertiary (university level) education.

The available data indicate that the Chinese workforce will continue to lag behind that of the EU (and even more than that of the US) in terms of the percentage of the younger cohorts that have a tertiary education. In China the enrolment rate in tertiary education in 2005 was still only 20%, much lower than the 56% recorded for the EU (and even further from the US ratio of 83%). Over the last 20 years there has been a jump in tertiary education in China, with enrolment ratios increasing by a factor of 7. But the starting point was so low that even today enrolment rates are below one-half of the European level. It is interesting to note that despite its reputation of strength in high tech services, India has made much less progress than China (tertiary enrolment up only from 6 to 11%). The Indian software industry seems to constitute an exception that hides an average which has falling behind that of China.

The upgrading of the skills of the Chinese workforce is thus proceeding less quickly than is sometimes assumed. However, one needs to recall that the cohorts that are currently studying (and will soon enter the labour force) are also much larger in China (about 3 times larger) than in the EU. This implies that in absolute terms one should expect that China will produce the same number of university graduates (including engineers, which have been the focus of much attention) as the EU. Moreover, as enrolment rates are still increasing rapidly it is unavoidable that China will soon overtake the EU (and the US) in terms of the number of scientists that graduate each year.

Table 6. *Enrolment ratios, 1985-2005*

	Secondary education (Net)			Tertiary education (Gross)		
	1985	1995	2005	1985	1995	2005
China	39.7	65.8	74.3	2.9	5.3	20.3
United States	91.2	90	89	60.2	80.9	82.7
India	37.9	48.8	56.6	6	6.6	11.4
EU27 (average)	82.7	97.9	100.8	26.7	44.9	56.2
Turkey	36	51.3	66.8	8.9	19.5	31.2

Source: World Bank.

4. Energy: China's carbon-rich economy

An additional area of friction that is likely to remain concerns energy. As shown in Table 7, China already now consumes almost as much energy as the EU (1,700 million tonnes of oil equivalent (mtoe)/year versus 1,780), implying that its energy intensity (energy consumption per unit of output) is only slightly higher than that of the EU, at least if GDP is measured at PPP. However, the composition of China's energy consumption is quite different from that of the EU

(or the US): China consumes almost four times as much coal as the EU. Moreover, if current trends continue, China would in 10 years consume 50% more energy than the EU. Most of the increase in the energy demand is likely to continue to come from coal, which is relatively abundant in China.

Table 7. Energy consumption and composition (mtoe)

	Primary energy consumption			Major fuels (2006)	
	1996	Today (2006)	Projected (2016)	Oil (net imports)	Coal (consumption)
EU	1691	1782	1878	720 (560)	320
US	2190	2326	2471	940 (608)	567
China	965	1698	2987	350 (169)	1,191
India	271	423	680	120 (80)	240

Sources: BP (2007), World Energy Review.

China's self-sufficiency in coal has two implications:

i) China is already now the biggest source of CO₂ emissions (coal is much more intensive in CO₂ than the equivalent energy obtained through oil or gas). Hence considerable frictions will arise to the extent that limiting CO₂ emissions remains an objective of EU policy. China will not be willing to accept any CO₂ tax, but if it were introduced by the EU, or at least throughout the OECD, this would create an important competitive advantage for Chinese producers.

ii) China is much less dependent on hydrocarbon imports than either the EU or the US, and the price of coal has increased much less than that for either oil or gas. The price of coal at various international trading stations has roughly doubled between 1999 and 2007, whereas the price has increased by a factor of 4 for crude oil (and gas). This fall in the relative price of coal will give Chinese producers a further cost advantage in energy-intensive industries (e.g. again steel). India resembles China in that it also has abundant coal reserves, but in terms of overall size, they are again much smaller, about one-quarter those of China, with a total annual consumption of primary energy of about 400 mtoe.

5. The EU and the rise of China

For a European it is interesting to observe that the process going on in China today is in many respects almost exactly the mirror image of the convergence process experienced within the enlarged EU. The new member countries had a relatively well-educated population, with only a small proportion still in agriculture, but they lacked a modern capital stock and the associated market-relevant know-how. The new member countries thus became large importers of capital, mostly in the form of FDI. As a result, productivity is increasing rapidly, allowing wages to converge quickly to the EU average.

By contrast in China, only part of the population works in the modern sector and the supply of domestic savings is much larger. With a domestic investment rate of close to 50%, the contribution of capital deepening to growth is (at roughly 5 percentage points per annum) the dominant growth factor in China.⁴ The role of FDI in China is thus 'only' to facilitate the transfer of know-how, not to provide funds for investment. Capital deepening is proceeding at

⁴ See European Commission (2005), "China and the World Economy: Growing in Harmony", Brussels.

such a rapid pace that on current trends China will have a capital/labour ratio close to that of the EU-15 within the next decade, and thus probably even before the new member states.

These differences between the economies of the new member states and China imply that in future the brunt of the adjustment to the rise of China will have to be borne by the capital- (and energy-) intensive industries in the old member states. The workers in these industries are not necessarily low skilled; they tend to have the highly specialised skills necessary to operate the large capital employed in these industries. They are generally well paid and organised, thus constituting, together with the capital owners, a strong lobby for protectionism.

A further key difference between China and the new member countries concerns the role of financial markets: they were totally liberalised in the latter and the domestic banking systems were taken over by EU banks. This has permitted the financing of a consumption boom and thus large capital imports. By contrast in China, financial markets have not yet been liberalised, leading, in conjunction with the absence of a social security safety net, to extraordinarily high savings rates. China has thus become a large (net) capital exporter, with its net supply of savings to the rest of the world (its current account surplus) now close to 1% of world GDP.

What does the emergence of a large exporter of capital goods and an increase in the supply of global savings imply for the EU? The increased supply of savings should keep interest rates low, but this does not require any particular policy reaction assuming it is properly recognised by the ECB. The very large current account surplus of China is a relatively recent phenomenon, and it is not going to increase indefinitely. Once it stabilises, China's imports will increase in line with exports, and the country will thus not have a deflationary impact on the global economy forever.

The ongoing shift from intra- to inter-industry trade that will result from the shift towards relatively capital-intensive products in China's exports suggests that labour market flexibility and constant re-training are more important than a special concern for unskilled workers in general. Another policy implication is that regional and industrial policies, which tend to support capital-intensive industries via investment subsidies are unlikely to work. As China becomes stronger and stronger in these sectors, these industries will not be able to survive without continuing support.

Taxing imports of capital-intensive products from China is not a policy option since China is a full member of the WTO. But even if it were possible, it would have an undesirable effect on income distribution since it would be favourable to capital owners, but have a negative impact on labour.

A key peculiarity of China's economy is its extraordinary degree of openness: exports amount to about 40% of GDP, a figure closer to the average of individual EU member countries, rather than the roughly 15% one observes for large economies like Japan, or the EU and US. From a continent-sized economy like China one would thus expect a much lower value. Moreover, about 60% of these exports are generated by so-called 'foreign invested enterprises' (enterprises with a large foreign participation).⁵ Over one-half of the Chinese 'export machine' is thus managed by foreigners. This suggests that while China is likely to remain stubborn in the pursuit of its perceived national interests, it is unlikely to become a disruptive element in the world economy. There is thus no reason why the EU should assume a confrontational stance vis-à-vis China.

⁵ See, for example, John Whalley and Xian Xin (2007), "China's FDI and Non-FDI Economies and the Sustainability of Future High Chinese Growth", NBER Working Paper No. 12249, National Bureau of Economic Research, Cambridge, MA.

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Annex

A Comparison of Chinese and Indian export structures

A simple way to document the evolution of the structure of Chinese trade is to look at the Balassa index, which shows to what extent a country's share in world exports of a certain category of goods is higher or lower than the share of the country in overall world exports. For example, if a country provides 15% of global exports of machinery, but its share in overall global exports is only 10%, the Balassa index will be equal to 1.5, indicating that the country has a revealed comparative advantage in this sector.

Table A1 below shows to what extent there is a similarity between the distribution of the Balassa index across the major SITC categories for China and for a group of other comparator countries. The crude measure used here is just the correlation coefficient of the Balassa index across 1-digit SITC categories (times 100). Given the small number of observations, individual results are not statistically significant, but the overall picture is clear: all correlation coefficients have changed sign over the last 20 years.

Twenty years ago the (distribution of sectoral export) specialisation of China seemed to be negatively correlated with that of major OECD countries and positively correlated with that of other emerging markets, such as Brazil and Indonesia.

Today (2005 data) the structure of Chinese exports is positively correlated with all OECD countries (the correlation is strongest with those countries (J, DE) specialised in heavy industry), but negatively correlated with other emerging market economies.

Table A1. An evolving Chinese export structure

	1986	2005
China*		-3
US	-27	25
Japan	-49	62
Germany	-71	46
Brazil	25	-45
Indonesia	67	-38
Italy	-24	42

* China 1986 versus 2005.

Note: Data represent correlation coefficients (*100) between the Balassa index for China and the other countries listed in the first column.

Source: Own calculations based on UN Comtrade data.

It is interesting to note, as mentioned, that the correlation coefficient has turned negative for the pairs China-Brazil and China-Indonesia. One could thus argue that the challenge to the EU provided by China is the opposite of that coming from these two countries. Hence it is misleading to lump the so-called 'BRICs' (Brazil, Russia, India and China) together.

The first row of Table A1 shows that today's export structure of China has little to do with that of 20 years ago since the correlation coefficient is essentially zero.

Table A2 shows that the correlation coefficient between China and India has diminished over time and is now rather low (17). This suggests that the structure of the challenge to the EU provided by India is quite different from that coming from China (even apart from the difference in size mentioned above).

The first row of the table shows that India's export structure has changed little over the last 20 years, since the correlation coefficient is rather high (72%). This is another indication of the different dynamics of these two countries.

Table A2. A stagnant Indian export structure?

	1986	2005
India*	72	
China	37	17
US	-13	32
Japan	-30	-14
Germany	-31	-24
Brazil	64	45
Indonesia	-22	-9
Italy	15	-24

* India 1986 versus 2005.

Note: Data represent correlation coefficients (*100) between the Balassa index for India and the other countries listed in the first column.

Source: Own calculations based on UN Comtrade data.