Attractiveness of India and China for Foreign Direct Investment

A Scoreboard Analysis

Juni 2009

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Abstract

China and India are the two leading countries in terms of attracting foreign direct investment. These two countries differ in a number of characteristics, which are important for FDI. Therefore the questions arise which general investment conditions are of importance for companies that are investing abroad, and which factors make India and China attractive as business locations for foreign companies? After a presentation of stylized facts about China and India and a discussion of location theories and location factors, we develop a scoring method to evaluate general investment conditions. Eight of the member states of the European Union in Central and Eastern Europe are used as a reference group to test the scoreboard rating tool, before it is applied for China and India.

Biographical notes

Dr. Nathalie Homlong is Associate Professor for Economic Geography at the University College Volda. In the past years she specialized in regional development with special focus on the European Union's policies in this area. Her further research interests are environmental economics in which she combines aspects of economic geography with macroeconomic outcomes, and furthermore localization decisions by companies. Dr. Elisabeth Springler currently is Marshallplan Chair at the University of New Orleans. She has a strong interest in Post-Keynesian Economics and tries to integrate economic policy questions within this economic framework. Her research of national financial systems and banking regulation and housing economics led her to development economics and problems of transition and emerging economies. Furthermore, Dr. Homlong and Dr. Springler are lecturers at the University of Applied Sciences bfi Vienna. They share an interest in India and China and wrote a handbook together for Austrian firms who want to invest in India and cooperated in a similar project about China.

1   Introduction

China has been considered the world's most attractive country for foreign direct investment (FDI) for several years. Lately India has followed as second in this ranking (A.T.Kearney 2007). This raises the question about the reasons for these developments. China's attractiveness is mainly regarded to lie in the availability of cheap labor, favorable investment conditions and in the growing consumer market. India also has cheap labor, but on the other hand seems to focus more strongly on qualified labor and qualitative use of new technology.

The aim of this paper is to assess the strengths and weaknesses of India and China for foreign direct investment and to draw up a comparison of these two countries. This paper investigates the following research question: Which factors make India and China attractive as business locations for foreign companies? From a theoretical point of view, location factors are discussed from numerous angles. However, once theoretical applications are applied to case studies or comparative country analysis, neoclassical approaches are the main focus. This paper will provide an alternative to these implementation approaches by integrating aspects of economic geography and alternative macroeconomic indicators into a scoreboard approach. Additionally the findings of the scoreboard analysis are compared by using a basic macroeconomic analysis, which – in contrast to the scoreboard analysis – incorporates times series data.

After presenting stylized facts about India and China, this paper discusses location theories, as well as macroeconomic and microeconomic localization factors. Then the authors identify critical localization factors and classify the performance of both countries by using a scoreboard analysis. The last part of this paper gives an outlook on future developments and discusses the results. In terms of methodology this paper is based on literature survey and comparative statistical analysis. A tool for benchmarking and ranking the potential of economies to attract foreign direct investment is developed and applied for India and China in comparison to EU15 and EU25 member states.

Two basic assumptions are underlying the analysis: First of all foreign direct investment is regarded as positive for economic development. Simultaneously it is presumed for the scoreboard analysis that all capital, which is used for foreign direct investment, is used efficiently and sustainably in economic and social terms. Therefore foreign direct investment is assumed to diminish the economic gaps between developed and less-developed or emerging countries. The question of how levels of foreign direct investment differ within a country, which might lead to agglomerations in specific sectors or clusters in specific regions and which result in differences in the macroeconomic outcome, as Henderson, Shalizi, Venables (2001) and Chudnovsky and Lopez (2002) point out, are not analyzed.

Any conclusions apart from macroeconomic developments are beyond the scope of the paper. Therefore also distance enters the analysis only as a cost factor related to insufficient infrastructure and not as crucial factor to determine the amount of foreign direct investment. This leads to the second important presumption in this paper. Although the effectiveness of institutions[1] is regarded as a necessary prerequisite for economic

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[1]   The paper follows the argumentation of Qiu (2005) in this respect, who points out the necessity of personal networks and institutional involvement to implement sustainable foreign direct investment.

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development and structural change in any transition economies (see for the Indian development Chakravorty 2000, 372-376), no matter whether the focus is laid upon the Eastern European economies or China with socialist traditions, or India, which has undergone a constant process of opening the economy in the last years, this paper does not control for the mode of structural change. The authors are aware that the malfunction of institutions might offset the positive effects of foreign direct investment, as is also pointed out in detail by Simmons and Supri (1999) in the case of micro-finance in the Indian Punjab region. Nevertheless, structural differences are expected to result from weaknesses in national or regional institutions, which cannot be offset by foreign direct investment and are therefore not part of the scoreboard analysis.

Despite the fact that these assumptions emphasize a macroeconomic understanding of development, the approach used in this paper is interdisciplinary. In this respect mainly aspects of economic geography enlarge the macroeconomic understanding as an alternative to economic mainstream approaches to economic development. Although space is not addressed as a separate category, the bundle of indicators used in the scoreboard approach integrates the demands of economic geography for accounting for cultural determinants, the risk of setting up businesses, as well as the integration of basic structural standards and political development. This is also partly reflected in the analysis of Wai-chung Yeung and Lin (2003, 122), which points out that especially for the changes in Asia new adaptations to economic geography approaches are necessary to explain the current institutional and economic developments. Although Wai-chung Yeung / Lin (2003) especially point out the necessity to analyze changes in institutional rigidities, this paper should serve as a step towards stronger integration of new geography and macroeconomic approaches, using a broad set of both structural and institutional indicators. Developments within a historical time frame are not integrated. From a macroeconomic point of view the analysis is based on structural and behavioural approaches. A detailed discussion of the theoretical background is provided below.

2   Stylized facts: economics and social development in China and India

Since the start of China's economic reforms in 1978 economic growth in China has been clearly above the average of industrialized countries (Bruns and Homlong 2006, 9). Since the late 1970s China's GDP growth rates averaged 9%, with a GDP growth of 9.9% in 2005 and projected growth rates from 2005 to 2009 of 8.0% (World Bank 2007). Following the United States, Japan and Germany, China had the fourth largest total GDP worldwide (World Bank: World Development Indicators Database), but due to its large population of over 1.3 billion GDP per capita came only to 6 757 USD in PPP in 2005 (UNDP 2007). Regional differences are significant. On the one hand there are large differences between the prosperous regions along the coast to the east and to the south compared to the west of China (Weggel 2002). On the other hand incomes in cities are on average far higher than in rural areas (Reisach, Tauber, Yuan 2003, 83). In terms of foreign direct investment, China has become the top recipient among developing countries and number 3 worldwide with inflows of over 72 billion USD in 2005 (UNCTAD 2006). In 2006 cumulated FDI reached 702 billion USD.

In India economic reforms started in the early 1990s (Oberender and Fleischmann 2006, 17) and therefore much later than in China. This was also reflected in the developments in economic growth. While China experienced already high annual rates of economic growth, as presented above, the development in India was more moderate at around 4% annual growth. The picture changed only after 2003, when India experienced stable growth rates between 8.3% and 9.2% (World Bank: World Development Indicators Database). In terms of attracting foreign direct investment India is ranked second after China. Nevertheless the amount of foreign direct investment into India is only around one tenth of the inflow to China, when comparing the average of the period 2001 to 2005 in these two countries (World Bank: World Development Indicators Database). In line with polarization theories of regional development, cumulative causation effects can be observed in India since it opened up for foreign investments (Chakravorty 2000).

3   Theoretical background

Location choices of companies are taken under different circumstances: with starting up of a new company; with relocation of an existing company; or with diversification of locations, i.e. adding new locations to existing ones (Sedlacek 1988). This paper focuses on the diversification of locations in other countries outside the country of origin of the company.

3.1   Indicators for location decisions

When taking a localization decision, companies have to take numerous factors into account to increase the chance of a successful investment. Many studies have addressed this by compiling factors that are considered important for the localization choice of companies. These factors can be categorized in different ways, like in economic, physical and cultural factors, as presented by Terpstra and David (cited in Nijkamp and Rienstra 2000, 64), or for example by distinguishing hard factors (e.g. transport costs, land costs) (Hansmann cited in Kinkel 2004, 51) and soft factors (e.g. life quality, level of cultural facilities) (Nijkamp and Rienstra 2000, 66-67).
Basing on this analysis country ratings are usually based on a mix of quantitative and qualitative data about a country. Scores for the individual factors are based on statistics for the quantitative factors and surveys among experts for the qualitative ones (Kinkel and Buhmann 2004, 32-34).

3.2   Project based approach and country classification analysis

The investment conditions found in a region or a country determine its attractiveness for investments. As presented in the previous section, numerous classifications of indicators are used to find a rationale for the attractiveness of economies for foreign direct investment. Although country ratings try to apply qualitative and quantitative analysis of the economy and therefore enlarge the purely economic statistical approaches by a broader socio-economic view, benchmarking and ranking of sample economies is often missing. An attempt to qualify and benchmark the results of quantitative analysis is done by Frenzel (2006, 274 following Geissbauer 1998). This serves as a starting point for the method developed in this paper.

Table 1: Project-focused country ranking

	Economic frame 18.0%
	Political development 15.3%
	Legal indicators 9.0%
	Structural standards 10.0%
Project-focused country ranking	Total costs: production and distribution 13.3%
	Financing and taxation 8.1%
	Personnel 9.9%
	Cultural determinants and ranking of the company 11.8%
	Risk of the foreign direct investment 4.5%

Source: Frenzel, Kerstin (2006)

Table 1 shows this *project focused approach*. The nine subgroups include all categories of indicators and integrate all the theoretical backgrounds presented above.

4 Modification of the project focused approach: scoreboard model

Unfortunately no clear explanation of the quantitative measurement is given in the analysis of Frenzel (2006) following Geissbauer. Therefore the approach is modified in this paper. As the focus is on the general attractiveness of economies for foreign direct investment, indicators which might be necessary for specific motives of foreign direct investment like purely production based motives or purely market based motives are excluded from the benchmarking. The reason for this decision can be easily explained with an example. Once production costs are very low and therefore household income is low, a company might decide to engage in foreign direct investment in this respective economy to increase production and sell the production in their export countries already existing before the foreign direct investment. Another company which conversely aims to sell products in the new market will focus on higher wages levels, whereas higher production costs will not be of relevance. As economies might attract rather production based or market based foreign direct investment, as well as a combination out of it, all indicators focusing specifically on a certain motive of foreign direct investment would distort the ranking.

Table 2: Adapted country ranking and benchmarking

Ranking	Groups	Indicators
3	*Economic conditions*	
		GDP per capita
		GDP growth
		Inflation (CPI) (HVPI for the evaluation of the 8 transition economies)
2	*Political security*	
		Corruptions index: % of managers surveyed ranking this as a major business constraint
1	*Political development*	Policy uncertainty: % of managers surveyed ranking this as a major business constraint
3	*Infrastructure*	
		Road network: Roads paved in % of total roads
		Internet user penetration: Broadband subscribers (per 1,000 people)
		Mobile communication: Mobile phone subscribers (per 1,000 people)
3	*Factor labour*	
		Productivity: Labor productivity per hour worked in Purchasing Power Standards
1	*Factor Capital*	
		Tax rates: % of managers surveyed ranking this as a major business constraint
		Taxes on income, profits and capital gains as % of total taxes
2	*Education*	
		Tertiary education: tertiary school enrolment as % of gross school enrolment.
2	*Trust*	
		Confidence index
17	**Total score**	

Source: own presentation

Based on these argumentations, the quantitative country ranking and the set of indicators used in this paper are more streamlined compared to table 1, as table 2 points out clearly. Although also nine subgroups are used in this adapted version, which basically reflect the subgroups of the approach of Frenzel (2006), these subgroups consist only of few indicators, focusing on the most important ones in the respective group. Only three categories, namely *economic conditions*, *infrastructure* and the *factor capital*, consist of more than one indicator. For the category *economic conditions*, real GDP growth rates are used as well as GDP per capita, which are especially important when focusing on economies with high population increases like China and India. As the development of inflation can be considered an important indicator for economic stability, this measure is added to the category economic conditions. Fiscal parameters are not included into this category, although they have a strong influence on economic stability. The authors assume that these parameters

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serve mainly as indicators for economic stability in issues of economic policy, but that enterprises do not concentrate on data of public debt and deficit for their decision regarding FDI. Therefore they are neglected in the further analysis. As regards the category *infrastructure*, the existence of transport network infrastructures and modern technology shall be evaluated. The percentage of paved roads of the total road network indicates the possibility of the distribution of goods and resource allocation. To this indicator aspects of modern technology are added, by including the number of internet users per 1,000 persons and the number of mobile phone users per 1,000 persons. These two indicators are of great importance when evaluating the potential of an economy to catch up in development with developed countries. It is known that for example in India a high percentage of the population does not have access to telephone-landlines as this network is highly underdeveloped. This deficit can easily be offset by a high number of mobile phone users. For international enterprises the existence of telecommunications is important, rather than the method. The same argument goes for the rate of internet users. Finally also the category *factor capital* consists of more than one indicator. In this case first focus is laid on the opinion of managers for certain business constraints, by the percentage of managers surveyed ranking tax rates as a major business constraint. The second indicator focuses on the fraction of taxes on income, profits and capital gains as percentage of total taxes. It is assumed here that the tax structure of an economy has an impact on the attractiveness for FDI. The higher the share of income and profit tax as well as tax on capital gains, the less attractive an economy is for foreign direct investment.

As regards the indicator categories *political development, political security, factor labor, education* and *trust*, the following indicators are used, respectively: the percentage of managers surveyed ranking corruption and political instability as a major business constraint, the labor productivity per hour in purchasing power standards, the tertiary school enrollment in percentage of gross school enrollment and the FDI confidence index published by A.T.Kearney.

The adapted version leaves out cultural determinants, as EU15 and EU25 averages are used as a benchmark. These countries differ greatly with regard to cultural aspects; therefore an average cannot serve as benchmark.

Besides that, also the weight of the individual sub-groups is revaluated in the adapted version, as reference literature - see among others Frenzel (2006) - use detailed percentages for weighing the importance of specific categories, without clear methodological background. To increase transparency, each of the sub-groups is therefore only weighted as *very important*, *important* or *of minor importance*. According to this weight each group receives a number 1 to 3 - in which 3 stands for very important and 1 for not very important. Preference in the rating system is given to basic macroeconomic indicators, which can be easily quantified. Based on this weight a total of 17 points can be reached by the economies to be analyzed. India and China are evaluated with EU15 and EU25 member states as a benchmark. A score of 17 points therefore means that the economic, political and structural framework of the economy is as stable as the EU15 or EU25 average. Higher growth rates with lower and stable inflation rates, for example can also lead to a higher score compared to the respective benchmark. This would mean that India or China are better and more stable economies for conducting foreign direct investment than a member state of EU15 or EU25 would be.

The respective scores represent deviations from the ratio of average performance of EU15 member states for the respective time period and the average performance of the respective economy under investigation. For any deviation from the EU15 average of more than 50%, 0.5 points are added or subtracted from the weight of the category. A deviation from the EU15 and EU25 average by 240% regarding the indicator inflation in the category economic conditions would mean that 2 points from the total score of three points in this category are subtracted for this indicator. To reach the final score of each category, the results of all indicators of the subgroup are added up. For example, for the category *economic conditions* GDP growth, GDP per capita and inflation rate are added up. This means that a bad performance regarding the inflation rate can be offset by high increases in GDP per capita or the real GDP growth rate. The same calculation applies for all categories accept for the category *factor labor*. As the measurement of labor productivity does never lead to major fluctuations in percentage, but small deviations indicate already structural problems, the calculation of the benchmarking system is adapted for this category. As the factor labor accounts for 3 points of the total scoreboard, any deviation of 14.28 percentage points from the EU15 average accounts for a change of 0.5 points. The argument for this approach is that labor productivity should be within the margins of 0 to 100. When split into a range from 0 to 3 using 0.5 steps, this leads to six ranges and approximates to 16.6 percentage points in range, this would not allow for any deviation from the average at all. As labor productivity varies also among EU15 member states without leading to an immediate significant impact on location decisions, an allowed deviation of 14.28 percentage points is integrated, which results from an equal split into seven categories. As the New Member States of the European Union with transition background showed average labor productivities of around 30% to 46% of labor productivity of EU15 member states in the period 1995-2000, the score varies between 1 and 1.5 points. Unfortunately this scoreboard category lacks data for the period 2001-2005 for a considerable number of economies. Therefore it is not used in the second time period (see table 3a and 3b).

Adding up the points of all categories leads to the total score and therefore to the attractiveness of foreign direct investment of the respective economy in comparison to EU15 / EU25.

From a theoretical point of view this also means that, compared to standard location factor analysis, this paper is based on a mixture between structural and behavioral approaches rather than a mixture between structural and neoclassical ones. As the focus will be laid on a country ranking rather than on a specific project, the analysis starts from a macroeconomic point of view. Contrary to that, the neoclassical location theory approach bases its analysis on a microeconomic level. Therefore neoclassical approaches are excluded from the analysis in this paper. Of course this rigid exclusion also shows the limits of the analysis. Nevertheless the approach of this paper will use the project based country ranking in an adapted formulation. A critical discussion of the results with regard to the needs and lack of sustainable development in terms of social and environmental indicators in the respective economies receiving foreign direct investment is presented in the last section of the paper.

5   Evaluation of the scoreboard method for FDI in CEE economies

To enable the assessment of FDI attractiveness of China and India, the scoreboard is tested for the eight CEE transition economies which became member states of the European Union in 2004. As these eight transition economies show substantial differences in speed and mode of structural change, the period from 1995 to 2005 is analyzed and split into two parts. All eight transition economies faced economic and financial crises in the early and mid 1990s.

Therefore the period of investigation starts with 1995, when most economic turbulences where solved and economic indicators showed prospering trends. When applying the presented benchmarking system for the eight transition economies in relation to the average of EU15 member states, not all data is available. Therefore the focus will be laid on e*conomic indicators, Infrastructure, labor productivity* and *education* in the period 1995-2000. The total score of the benchmarking system, which indicates a level of attractiveness similar to the average of EU15 members, should be 11. A score below that level indicates a weaker position in terms of attracting foreign direct investment. Conversely a score higher than 11 shows that the respective economy is more attractive for foreign direct investment than EU15 member states. These results should also be reflected in the level of foreign direct investment inflows as a percentage of GDP.

To apply the benchmarking system, first the average of all indicators of the EU15 member states and of the eight transition economies (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia) across the time period is calculated. In a second step the ratio between each of the eight transition economies and the EU15 average for all categories and sub-indicators is computed. As shown in table 2, the country ranking system for the category *economic conditions* consists of three indicators: GDP per capita, real GDP growth and the inflation rate measured by the harmonized consumer price index, as all economies are member states of the European Union. Similarly to the category *economic conditions*, also the category *infrastructure* comprises three indicators. Although data is only available for the period 2000-2005, the results are also used for the period 1995-2000, as it is assumed that infrastructure conditions cannot change substantially in this short period. This applies especially to the indicator *percentage of roads paved of total roads*. Although the indicators in this category regarding modern technology, namely the number of internet users per 1,000 persons and the number of mobile phone connections per 1,000 persons, developed strongly in the last years, it is assumed that all these economies, member states of EU15 as well as the eight transition economies, started to develop at the same point of time. Therefore the results of the category infrastructure, although data for the period 2000-2005 are applied, do not distort the relation between each of the eight transition economies and the EU15 member average. The category *education* is assessed with the indicator *percentage of tertiary school enrollment to gross school enrollment*.

Table 3: Country ranking of CEE economies 1995-2000 and 2000-2005

3.a.) Period 1995-2000: Benchmark 11 points total score

	Economic Indicators	Infrastructure*	Factor Labour	Education	Total
Czech Republic	0	2.5	1.5	2	6
Estonia	2	2.5	1	2	7.5
Hungary	2.5	1.5	1.5	2	7.5
Latvia	2	1.5	1	2	6.5
Lithuania	-3.5	2	1	2	1.5
Poland	-5	2	1	2	0
Slovak Republic	-1	2.5	1.5	1.5	4.5
Slovenia	-2	2.5	1.5	0	2

* Data 2000-2005 used in this case

Data source for categories: World development indicators database, Eurostat database; own calculations

3 b.) Period 2000-2005: Benchmark 12 points total score

|	Economic Indicators	Political security	Political Development	Infrastructure	Factor Capital	Education	Total
Czech Republic	0.0	0.5	-0.5	2.5	0.0	2.0	4.5
Estonia	2.0	2.0	1.0	2.5	1.5	2.0	11.0
Hungary	2.5	2.0	-1.0	1.5	1.0	2.0	8.0
Latvia	2.0	2.0	-0.5	1.5	0.5	2.0	7.5
Lithuania	-3.5	1.5	-0.5	2.0	1.5	2.0	3.0
Poland	-5.0	1.0	-2.5	2.0	1.5	2.0	-1.0
Slovak Republic	-1.0	2.0	0.5	2.5	0.0	1.5	5.5
Slovenia	-2.0	2.0	1.0	2.5	0.5	0.0	4.0

Data source for categories: World development indicators database, Eurostat database, International Global Corruption Barometer Report 2006, Global Market Information Database; own calculations

Tables 3a and b show the results for the two periods for the eight transition economies. As mentioned above, in the period 1995 to 2000 the benchmark for EU15 member states equals 11 points. Table 3a shows a clear distinction into two groups, those with scores starting from 5.5 to 7.5 points compared to a group of countries far below that level. Comparing these results with the inflows of foreign direct investment measured as percentage of GDP, the same distinction can be made. Estonia, Latvia, Hungary and the Czech Republic received a total score between 5.5 and 7.5 points, which made them very attractive, compared to the other transition economies. These countries also received the highest amount of net foreign direct investment inflows as a percentage of GDP, on average between around 6% and 8% of the respective GDP in this period. The foreign direct investments came mostly from member states of the EU15.

Also for the period 2000 to 2005, the results of the total score and the received net inflows of foreign direct investment as percentage of GDP show a fairly good match, although here the scoreboard cannot explain the situation in all transition economies. Two explanations for this weaker correlation can be found. Firstly the transformation period started with uneven economic performances across the new member states. Countries with stable economies and structural performances also received high foreign direct investment. This is

reflected by the scoreboard. In the second period, however, the competition among the eight transition economies for foreign direct investment increased as well as the establishment of sector clusters. The performance of these clusters paved the way for future foreign direct investment. Especially the Czech Republic is falling back in the ranking in the second period. Nevertheless foreign direct investment inflows were still high, meaning that specific sectors profited from their experience in previous periods and their existing relations to foreign investors. This aspect is not included in the scoreboard analysis. Secondly, in addition to the competition between those eight transition economies, also new potential recipients for foreign direct investment entered the international scene and competed with the eight transition economies under investigation. These new potential recipients are especially China and India. Also this aspect of international competition is not reflected by the above analysis of the eight transition economies.

Graph 1: Foreign direct investment, net inflows (% of GDP): 1995-2000 and 2000-2005
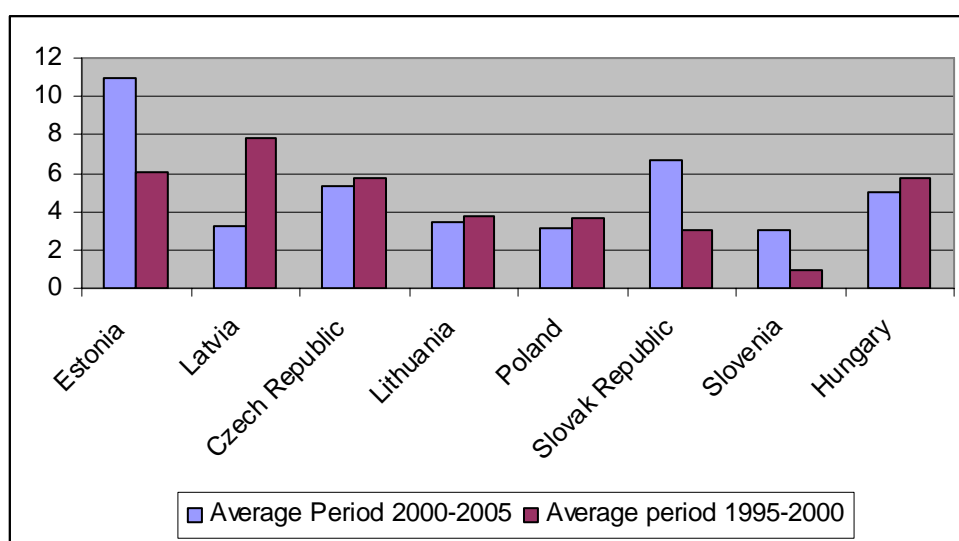
Datasource: World Development Indicators; own calculations; own presentation

Nevertheless is can be concluded that the adapted scoreboard can serve as a valid benchmarking system for attractiveness of foreign direct investment.

The above analysis concentrated on the relation between the "old" member states of the European Union to the "new" member states of the European Union, manifested as the eight transition economies. As shown above, new economies in transition compete also for foreign direct investment and China and India can be considered as more successful and important than the ones in Central and Eastern Europe. Although China started much earlier with attracting investments from European economies, especially in the last years India showed a strong increase in importance. Therefore the following analysis aims at showing the relation between India and China in comparison with the EU15 member states, but also intends to shed light on the potential increase in competition between the enlarged European Union and these "new" transition economies in Central and Eastern Europe.

6 Assessment of strengths and weaknesses for FDI in India and China

Based on the criteria defined in Table 2, the attractiveness for foreign direct investment in India and China is assessed in Table 3. Data was available for all categories except for two, namely the factors *labor* and *education*. As not to bias the comparison, these two categories were excluded from the analysis. Therefore the total score which is equivalent to the same level of attractiveness for FDI for India and China compared to EU15 and EU25 member states is 12. To conduct the analysis for India and China, the average data for the years 2001-2005 for all indicators presented above is compared to the average development of EU15 and EU25 member states. In this case the average is taken across countries and times. According to the importance of each indicator, which is based on the analysis of Frenzel but simplified, 1 to 3 points are given. As described above, 3 points represent the highest importance of the indicators in the scorecard. To enable the benchmarking with EU15 and EU25 economies, full scores are given whenever the data for the two economies in question does not vary from the average of the reference economies by more than 50%-points. For any difference higher than that, 0.5 points are added or subtracted for every additional 50%-points difference. This means that a result of 1, for example in the case of India in reference to EU15 for the indicator *political development*, refers to the value of 110.46. Similarly the value 1 in the case of China with reference to EU15 for the indicator *factor capital* stands for the sum of two different indicators, for which China reaches the results of 152.79 and 47.23. This means that the difference of the value of 152.79 compared to a value of 100 is above 50%-points and leads to a change in the score – a subtraction by 0.5 points. A high fraction of managers considered the general tax level a major obstacle for foreign direct investment. Additionally the second reference in this category – the taxes on profits and capital gains as percentage of total taxes - leads to a value of around 47.23, which in this case means that the tax on capital is below the value of the EU15 average. For this difference an additional 0.5 points are given. As this indicator is only of minor importance the score given is 1. The total score does not change as the first indicator leads to a reduction and the second indicator to an increase of the same size. Therefore the scoreboard shows 1 point for China with reference to EU15.

Table 4: Country ranking for India and China

Groups	Ranking	Ranking	India EU 15	China EU 15	India EU 25	China EU 25
Economic conditions	3	3	6.5	-12	7.5	5
Political security	2	2	-0.5	-0.5	0.5	0.5
Political development	1	1	1	-1.5	1.5	0.5
Infrastructure	3	3	0.5	1.5	0.5	1.5
Factor labour	3	no data	--	--	--	--
Factor Capital	1	1	1	1	1.5	1.5
Education	2	no data	--	--	--	--
Trust	2	2	2.5	2.5	2.5	2.5
Total score	**17**	**12**	**11**	**-9**	**14**	**11.5**

Data source for categories: Eurostat database, World Development Indicators, International Global Corruption Barometer Report 2006, Global Market Information Database; own calculations

As observable in table 3, India is on average almost as attractive for foreign direct investment as the EU15. When comparing to the EU25 member states, India is even more attractive for foreign direct investment with a score of 14 compared to the standard of 12 for the average of EU25 member states. The situation in China is more diverse. The total score when comparing China with the EU15 average is presented in table 3 with – 9, which means that China would be totally unattractive for foreign direct investment. The reason for this negative score can be found in the performance of the consumer price index, which fluctuated significantly in the last period under investigation, all other economic indicators showed a stable development. At 11.5 that score is much higher and reaches the level of European economies in terms of attractiveness when comparing China to the EU25 member states. In this case the performance of economic indicators is much better than when comparing them to EU15 member states. The reason for this change can again be traced back to the performance of one single indicator within the classification of economic indicators: the CPI fluctuations. The influence of this indicator on the evaluation of the category economic performance is shown in table 4. Although it becomes evident that the scoreboard analysis might change significantly when one indicator is changed or left out, which might be seen as a weakness of the method in general, it becomes evident, when comparing to the results of the New Member States of the European Union presented above, that the scoreboard as designed here, leads to valid results.

Graph 2: Economic performance indicators in China and India
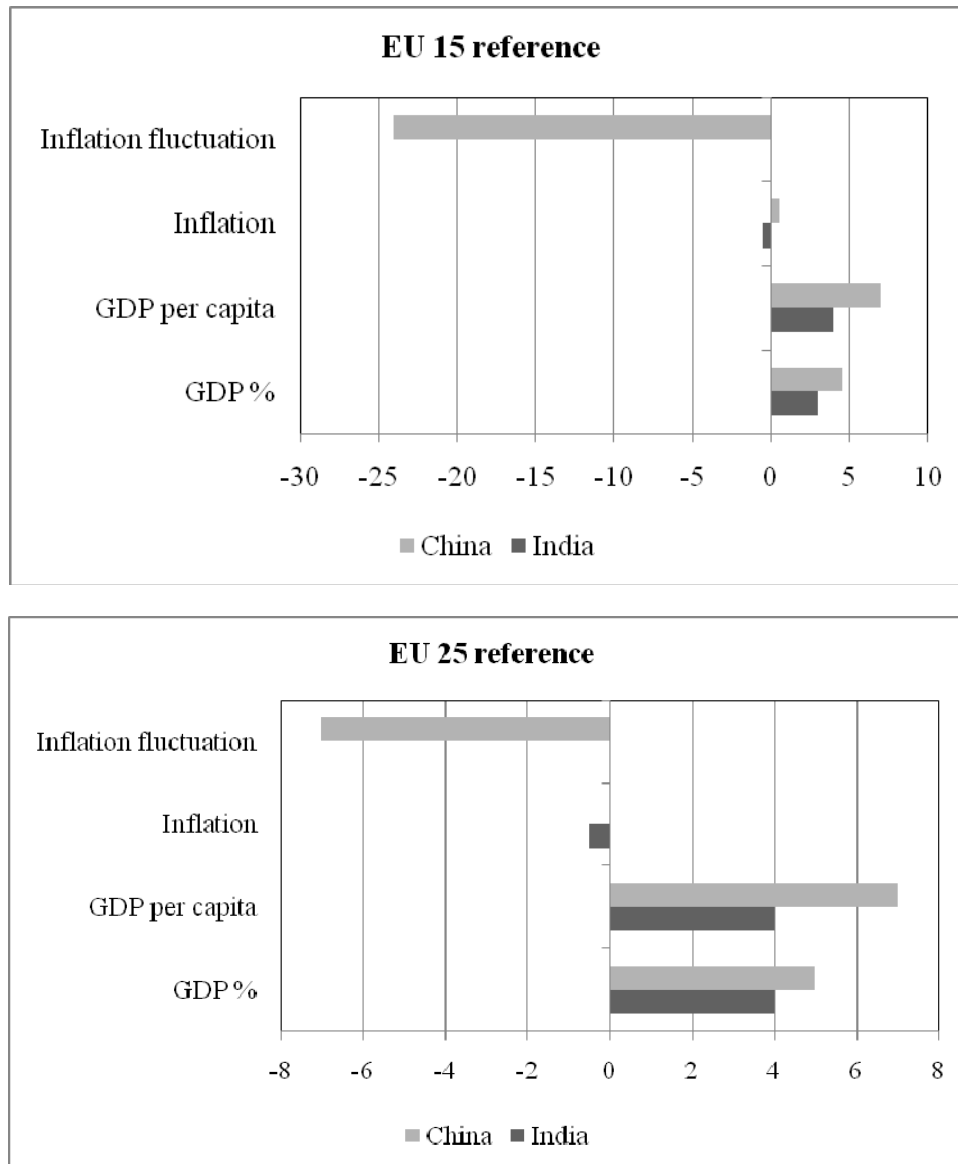
Datasource: World Development Indicators Database; own calculations, own presentation

It can be seen that China is more attractive for FDI than EU15 and EU25 member states, as China shows a higher score in terms of annual growth of GPD, GDP per capita development and the average of the consumer price index in the period 2001-2005. The performance is also better than the one in India. In contrast to these stable developments, the fluctuations in the consumer price index are much higher in China than in any other country of the sample. The reason for integrating changes of the consumer price index in the analysis can be found in the argumentation of Terpstra and David (cited in Nijkamp and Rienstra 2000, 64), who include exchange rate risks into the discussion. This argument seems to be especially important for two specific forms of business activity with other economies: in the case of trade, and in the case of production in the host country with export of the final product. As the goal of the analysis in this paper is to discuss the potentials of India and China on a more general level, without focusing on specific forms of cooperation, the fluctuations of the consumer price indexes are used. On the one hand this indicator gives an overview over the internal level of monetary stability. On the other hand it can be argued that consumer

price indexes and exchange rate developments are interrelated, as the latter refer to the external stability of the monetary conditions. This means that for the discussion in this paper, fluctuations in the consumer price index are a more general and therefore better indicator for monetary stability than exchange rate developments. The results of this indicator do not fully reflect the picture given by most economic studies, which do not refer to consumer price fluctuations.

The necessity and furthermore difficulty of selecting and weighing those indicators with the highest impact for foreign direct investment decisions becomes evident once more, when looking at the results of the scoreboard in the category *infrastructure*. Both India and China are below the average of EU15 and EU25 member states, as presented in table 3. This category includes basic means of infrastructure as roads as well as important structural components for new technology. Especially in this respect significant changes could be observed in the last years, which show growth rates far above the growth in EU15 or EU25 member states. Graph 3 shows the growth rates in the case of mobile phones and broadband internet connections.

Graph 3: Mobile and Broadband growth in China and India
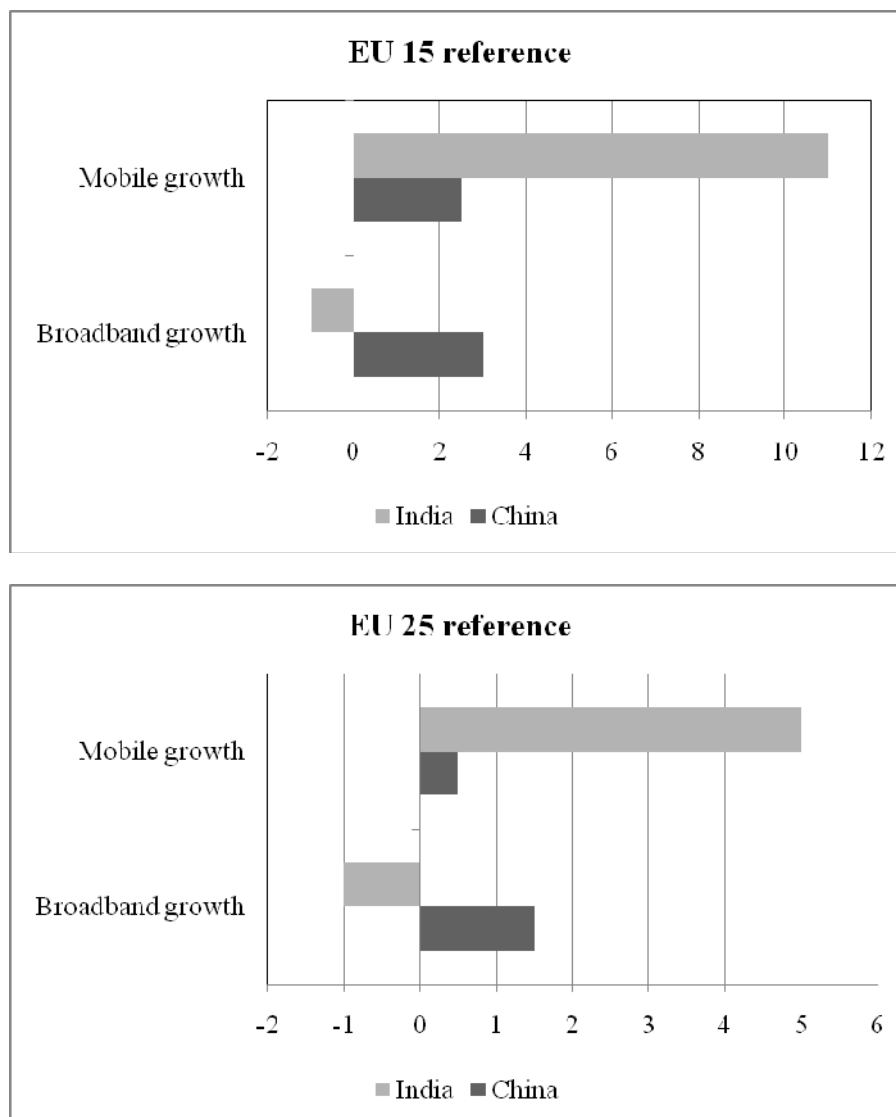
Datasource: World Development Indicators Database; own calculations, own presentation

Especially increases in mobile phone use in India shows that the economies are able to offset poor basic infrastructure development by introducing modern communications systems, which serve as an alternative to landlines. Similar trends can also be observed in the area of broadband internet connections. In this case China has experienced more rapid growth than both EU15 and EU25 member states. India is lagging behind in this area, but given the more recent economic developments, high growth rates in the future can also be expected in this area.

Despite these recent developments, it has to be pointed out clearly and it also becomes obvious when looking at the scoreboard, that both economies are lagging behind in terms of overall infrastructure, which might hamper foreign direct investment especially in those areas were transportation and distribution of goods is necessary. Although this macroeconomic point of view has to be modified for the specific needs for individual sectors, the general attractiveness for foreign direct investment can be shown.

7   Summary and outlook

To evaluate the attractiveness of emerging economies for foreign direct investment from a macroeconomic point of view, the scoreboard presented in this paper has proven to be a useful tool. It enables a quick and clear ranking of economies in comparison to a single reference economy or a set of reference economies, as was the case in this paper. As many European companies are keen on relocating their production process or aim to expand their business to new markets, EU15 economies are a relevant benchmark. The new destinations for inflows of foreign direct investment, China and India, are in direct competition with the new member states of the European Union, which where in their prime in terms of receiving foreign direct investment in the late 1990ies. Therefore the introduction of EU25 as a second benchmark shows how strong the competition between old and new member states of the European Union is.

It could be shown clearly that India and China are very attractive for foreign direct investment. Especially when comparing to EU25 member states, India profits from its stable economic development and political framework. Especially in economic terms China has higher growth potential, but is also more risky. Investments might be hampered by the fluctuations in economic conditions; the example given in this paper is the development of the consumer price index.

Besides the potential of the method introduced above for a quick and overall assessment of the attractiveness for foreign direct investment, its limits have also been pointed out clearly. While the strong point of the assessment method is its evaluation of the overall macroeconomic and structural potential of an economy, the weakness can be found in neglecting the various requirements of specific sectors in the economy. When focusing on this level, two adaptations in the method are necessary.

Firstly, a different weighting of the importance of each category has to be carried out. Infrastructure, such as roads and train tracks, might be more important in case of ground transportation of goods. Capital productivity as part of macroeconomic indicators, such as consumer price fluctuations, might be of minor importance in case of manufacturing with high labor intensity and export of the final product to another economy.

Secondly, the selection of the individual indicators included in each category might have to be altered for specific sectors, as the indicators used here focus on macroeconomic stability and structural development, but not on the needs of a specific line of business or investment motive.

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