CIS
uni | eth | zürich
Center for Comparative and International Studies (CIS)
Working Paper No 35, 2008
Published by the Center for Comparative and International Studies (ETH Zurich and University of Zurich)

UN approval of greenhouse gas emission reduction projects in developing countries: The political economy of the CDM Executive Board

Florens Flues
florens.flues@pw.uzh.ch

Axel Michaelowa
axel.michaelowa@pw.uzh.ch

Katharina Michaelowa
katja.michaelowa@pw.uzh.ch

Universität Zürich

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

UN approval of greenhouse gas emission reduction projects in developing countries: The political economy of the CDM Executive Board

Florens Flues
florens.flues@pw.uzh.ch

Axel Michaelowa
axel.michaelowa@pw.uzh.ch

Katharina Michaelowa
katja.michaelowa@pw.uzh.ch

University of Zurich and Center for International and Comparative Studies (CIS)

Abstract

The approval of methodologies and individual projects in the context of the Kyoto Protocol's Clean Development Mechanism (CDM) is often an issue of national interest. Decisions of the CDM Executive Board (EB) can thus be expected to be highly politicized. Based on data for about 250 methodologies and about 1000 projects discussed by the EB so far, this paper provides a first econometric analysis of this hypothesis. The results suggest that indeed, along with formal quality criteria, political-economic variables determine the final EB decision. This is most clearly the case for decisions on CDM projects which are far less transparent than those on CDM methodologies. In particular, EB membership of the country or countries concerned raises the chances of a project to be approved. Moreover, clearly, with rising numbers of methodologies and projects, EB decision making has become stricter over time.

Key words: International climate policy, CDM, political economy, rational choice, international organization

JEL Codes: D73, O19, Q56

Helpful comments by Thomas Bernauer, Simon Hug, Thomas König, Ulrich Oberndorfer and participants of the CIS/KOF conference on the Political Economy of International Organizations (PEIO) in Ascona, 3-8 February 2008, as well as of the 16th Ph.D. Workshop on International Climate Policy at the ZEW in Mannheim, 1-2 May 2008, are gratefully acknowledged.

1. Introduction

The CDM Executive Board (EB) is an institution within the UN Framework Convention on Climate Change (UNFCCC) system defined by the Kyoto Protocol. Its 20 members and alternates are elected by the Conference of the Parties and meet in about monthly intervals to register individual projects to be carried out in the framework of the Clean Development Mechanism (CDM). Moreover, they are responsible for the approval of methodologies used to assess current and future projects' additionality and to calculate as well as monitor their emission reductions.

As the CDM allows industrialized countries (listed in Annex B of the Kyoto Protocol) to receive Certified Emission Reductions (CERs) from projects in developing countries, the assessment of additionality is vital to determine whether emission reductions through these projects would not have happened without the CDM as well. The approval of non-additional projects leads to benefits of the investor in the industrialized and/or in the developing country concerned, depending on resource flows agreed between these partners, to the detriment of global protection against climate change. The type of projects and the methodologies proposed depend to a large extent on the developing countries' natural resources and the technological paths currently used for energy and industrial production. The approval of specific methodologies and project types therefore often becomes an issue of national interest. Decisions of the CDM Executive Board are thus expected to be highly politicized.

At the same time, the evaluation of whether a methodology is adequate to correctly calculate emission reductions and properly assess additionality, and whether a specific project meets these requirements, requires important technical knowledge which cannot be expected from EB members who are usually delegated from national bureaucracies. Special committees of researchers and other experts are therefore set in place to analyze these technical questions. The responsible technical committee for methodologies is the Methodology Panel (Meth Panel); for individual projects, it is the Registration and Issuance Team (RIT). Formally, both bodies have no decision making power; all decisions are taken by the EB. While Meth Panel recommendations are reported in openly accessible minutes of the meeting, there is no transparency about RIT recommendations. It follows that EB decisions on methodologies can be easily compared with the Meth Panel recommendations while this is not the case for decisions on individual projects. In addition, positions on individual projects are exchanged in the EB behind closed doors despite the general rule that EB meetings should be public (UNFCCC 2006, Decision 4/CMP.1, Annex I, rules 26 and 27, p. 38).

Given high stakeholder interest in both methodologies and individual projects, the lack of transparency raises doubts about the extent to which the scientific and technical assessment indeed drives final EB decisions. In addition, it suggests that political-economic determinants of decision making should be particularly strong for individual project decisions because transparency is higher for methodologies.

Based on nearly 1000 projects and 250 methodologies discussed by the EB until October 2007, we empirically investigate the relevance of political-economic versus technical determinants of EB decision making. In this context, we focus on the role of EB members' nationality, the relevance of the specialized technical committees, change over time due to increasing numbers of methodologies and projects, and the degree of transparency of the EB decision making process.

This is the first empirical analysis of the determinants of EB decision making. Our hypotheses are derived building on the broader literature in political economy, on evidence for other international organizations, as well as on anecdotal evidence reported about the EB in the context of individual methodology or project discussions.

In Section 2, the theoretical ideas will be outlined in more detail and allow us to motivate our hypotheses. Section 3 then discusses the data and the estimation method we use for our econometric analysis. Section 4 presents the results. Finally, Section 5 derives first conclusions and policy recommendations for the further institutional development of the UNFCCC Secretariat and its CDM Executive Board.

2. The political economy of EB decision making: A brief theoretical foundation

According to the rules of the Kyoto Protocol, a CDM project may be accepted only if it generates emission reductions which are additional to reductions that would have happened without the CDM (additionality). For instance, if the investment into a new power plant replacing an old one leads to higher energy efficiency and reduced emissions, this project does not automatically qualify for the CDM. If the replacement is economically attractive for mere efficiency reasons, the investment will take place without the CDM, and no CERs should be issued for it. However, any investor planning such a project has an obvious incentive in trying to argue that it is additional, because the CERs potentially generated can have a considerable financial value for him. For example, a wind power plant with an investment cost of 100 million € in a moderately attractive wind regime could annually generate CERs of a value of 6 million €. In extreme cases (e.g. industrial gas projects), the value of CERs generated in a single year can even be a multiple of the initial investment cost. Thus, there is reason to believe that investors and other stakeholders are strongly interested in influencing EB decision making. Let us now consider the potential interests in a more systematic way.

These interests may arise in different countries: the host countries, usually developing countries, but also including individual high income countries like South Korea, and the buyer countries which are industrialized countries with emission reduction targets as defined in Annex B of the Kyoto Protocol (Annex-B countries). The actual investor may be a national or international firm or a public institution. The project may be developed in the host country alone (unilateral CDM) or result from cooperation between a host and a buyer country investor.

If a project is registered by the EB and becomes operational, it generates CERs. In case of unilateral CDM, as no buyer country is directly involved in the project investment, the CERs can be sold by the host country investor at market prices. Otherwise, the benefits arising from the CERs are shared between the host and the buyer country investors whereby the shares depend upon the negotiation power of each party. The buyer country investor can then either also sell his part of the CERs on the market or use it to compensate his domestic emissions. In the case of bilateral CDM, the host country can also benefit from technology transfer.

The above discussion shows that both private investors and governments themselves may have an interest in their CDM projects to be approved. As private firms cannot directly influence policy making at the international level, we assume that they will lobby their governments for support.

Moreover, not only investors can benefit from the CDM. In the last few years, the CDM has also become an important business for various kinds of consultancy and auditing services. There are consultancy services required for the development of project documentation, which is then to be audited ("validated") before a project may even request registration from the EB. Consultancy services are also required for the design of CDM methodologies. The organizations involved in this business are often private consultancy firms for which the success of getting a major project registered or of getting a methodology approved may be crucial for acquiring new orders in the future. We can therefore expect that these consultancies – just as private investors directly involved in CDM projects – will lobby their governments to ensure the success of their proposals.

Finally, international organizations become involved in the process. They frequently act as an intermediate buyer pooling CDM projects to establish funds with the resulting CERs equally benefiting all the members of the fund. The pioneer and most well known example is the Prototype Carbon Fund (PCF) of the World Bank operational since April 2000. The World Bank has opened up ten other funds since then (World Bank 2007, pp. 4-5). For the World Bank, this field represents a challenging new area of diversification. Of course, just as governments and private investors, the Bank is interested in positive EB decisions for its projects. Firstly, it has to defend its image of a highly professional think tank in all areas of international development. And secondly, it might not be able to obtain subscriptions for new funds if projects in the portfolio of existing funds face difficulties in the registration process.

Moreover international organizations compete with private consultancies in designing CDM methodologies. Again the World Bank is at the forefront of activities in the area, and the stakes in favorable EB decisions on its methodologies are at least as high as for individual projects. Apart from the World Bank, the Asian Development Bank is involved in several CDM activities, but only to a very limited extent.

In general, for most of the actors described above, one might expect the interest in having methodologies passed to be even higher than the interest in the registration of individual projects. The reason is that there are fewer methodologies, and that each of the methodologies predetermines the CDM potential of a whole group of individual projects. At the same time, the stakes of individual countries in a given methodology depend on the geographical spread of the relevant technology. A methodology for hydro power, for instance, will be applicable in many countries, so that many countries will be similarly interested. A methodology for N_2O reduction from adipic acid production, however, can be used only in China, South Korea and Brazil because other countries do not apply this technology. The approval of methodologies relevant for technologies only in a small number of countries may benefit some countries (and / or their investors) to the detriment of others – as it can attract investment which substitutes for investment elsewhere. We therefore expect debates about this type of methodologies to be the most highly politicized.

We also expect some differences in the political interest in different type of projects. Here, however, interest can be assumed to simply depend upon project size. For small projects, even the official texts provide for a different treatment with faster procedures and less restrictions concerning project evaluation. Depending on project type, small projects have to meet one of the following thresholds: (i) renewable energy: <15 MW; (ii) energy efficiency: <60GWh (before December 2006: <15GWh); (iii) all other projects: <60 000 CERs (before December 2006: project emissions < 15 000 t CO_2-equivalent). Small projects can be distinguished from other projects through a specific methodology code number.

We have argued for stakeholder interest, but how could this effectively influence EB decision making? We adopt a simple rational choice perspective and consider that EB members take their decisions after an evaluation of the political and economic costs and benefits of either alternative. Obviously, they may also follow normative environmental objectives, but for simplicity and to sharpen the argument, this will not be explicitly considered here.

In line with the general literature on decision making in international organizations we expect that countries directly represented among the ten members or ten alternates of the EB have a higher chance to influence decision making in favor of their governments, private investors or consultancies. While only the members have a formal right to vote, decisions are usually based on a consensus so that alternates, who have the same right to participate in the debate, can be assumed to be similarly influential.

In contrast to other international organizations where the overriding dominance of individual member states is a frequently analyzed topic (see e.g. Fleck and Kilby 2006 for the World Bank or Barrow and Lee 2005 for the IMF), voting power is distributed equally over all members in the EB. Nevertheless, there could be differences in the effective influence an individual EB member may be able to exert. This influence may be related to the overall importance of a country which can raise its negotiating power (e.g. through informally linking up the issue at stake with cooperation or pressure in other fields). Moreover, it may be related to different levels of effort linked to a different strength of incentives. While all countries can benefit from the CDM, the potential for such benefits may be quite different. For instance, relatively more advanced developing countries which are generally attractive for foreign direct investment (FDI) are usually also more attractive as host countries for the CDM (Michaelowa and Michaelowa 2007). On the buyer country side, it could be relevant which obligations for emission reductions the countries took up under the Kyoto Protocol, and to what extent economic, technical and political constraints hinder them to meet these obligations domestically. Moreover, it may be relevant, whether a country already has a strong position in FDI which could enhance the potential interest for the CDM.

Similarly, even countries not represented in the EB may have higher chances to get their projects and methodologies adopted if they are generally powerful players and if there is a high incentive for them to engage in influencing the decision making process.

As far as international organizations are concerned, they are never directly represented by an EB member country. However, the methodologies and projects they develop are generally relevant for a number of countries, some of which will almost certainly be represented in the EB. Moreover, the World Bank as the predominant international organization involved in the field is present everywhere in the debates and has a strong information and lobbying power. Finally, it may use networks within the international bureaucracy to reinforce its position.

In general, the extent to which EB members will favor political-economic over technical or scientific quality considerations must be expected to depend upon the institutional setting of the decision making process. In particular, the transparency of the process appears to be an important variable here. Many non-governmental organizations (NGOs) have taken a critical stance towards the CDM because they fear that anything but emission reductions at home can easily lead to an abuse and to CERs generated for projects which are neither additional nor sustainable (WWF 2007, p. 2; CDM Watch 2005). Clearly, under such conditions, a divergence between EB decision making and the technical advice of the relevant advisory committees will be closely scrutinized and may give raise to protests which can harm the

image of the EB and the CDM as a whole. Obviously, NGO interventions are much easier when the information on both technical advice and EB decision making are openly available.

As already mentioned above, according to official rules, EB deliberations should be open to the public. Parts of the discussions in EB meetings are even downloadable as a video on the internet (UNFCCC 2007a). However, the EB can decide to exclude the public in exceptional cases (see Annex 1 for the exact formulation of this clause). Interestingly, these exceptions have become the rule in the case of deliberations and decisions about individual CDM projects. Therefore, while the process is widely transparent for decisions about methodologies, the only information available on individual projects is the actual decision. For CDM projects, there is no information on country positions or on arguments exchanged. In fact, even the initial quality assessment by the Registration and Issuance Team (RIT) is considered confidential information, so that there is no basis for comparison for any external observer. The opposite is true for methodologies, for which the initial Meth Panel recommendation is recorded in the official minutes of the meeting which are easily accessible on the UNFCCC website. Given the political cost of criticism, we may thus expect that political-economic determinants of EB decision making will be stronger for decisions on projects than for decisions on methodologies.

Finally, it appears plausible to assume that it is in the joint interest of all actors potentially benefiting from the CDM to show that the mechanism works. Policy makers may also wish to show that, for the simple reason that they have taken a positive decision on the introduction of this market mechanism in the first place – a decision which would otherwise be considered by the general public as a failure. In order to show that the mechanism works, in the first place, a certain volume of CDM activities is required, i.e. sufficient demand for CDM projects must be generated and a relevant number of projects have to become operational. In the initial years, this may lead to a rather mild scrutiny of methodologies and projects submitted for registration. At the same time, in the long run, a decision making body cannot always let everything pass if it wants to be taken seriously by any outside observer. In addition, the CDM might be rejected as a whole if the assessment procedure is deemed to be unreliable. Therefore, the selection process can be expected to become stricter over time.

Combining the different arguments motivated through the theoretical considerations above, we can sum up the discussion with the following hypotheses:

(1) EB decisions tend to favor projects and methodologies relevant for EB member countries (their governments, private investors or consultancies).
(2) Countries for which the CDM has a high potential and countries which are generally powerful players have a higher chance to see their projects and methodologies accepted by the EB.
(3) If the World Bank is involved in individual projects or methodologies, this also raises their chance to be accepted.
(4) Due to the lack of transparency, political-economic as opposed to technical or scientific considerations are more important for EB decisions on individual projects than for decisions on methodologies.
(5) Political-economic considerations are more important for those methodologies which are relevant only for a limited number of countries, and for big rather than for small projects.
(6) EB decision making becomes stricter over time.

3. Data and estimation methods

We use a self-compiled dataset based on data from the UNEP Risoe Center (URC 2007) to empirically test our hypotheses. Our data contains qualitative information on the type and status of all projects and methodologies available on the CDM website of the UNFCCC on October 31, 2007. As we are interested in the determinants of EB decision making, we select only those cases where the status indicates that some EB decision has already been taken. This includes a total of 985 projects and 239 methodologies (including 31 afforestation and reforestation methods).

For these projects and CDM methodologies, the original URC dataset contains information on the host and (in case of multilateral CDM) the buyer countries, the names of the relevant consultancies or international organizations, the intermediate and final assessments of the EB, as well as the relevant dates for submission of and decisions on methodologies.

We expanded this dataset in many ways. First, we looked up the EB decision date for projects from individual project design documents (PDDs) available online (see UNFCCC 2007b). Then, we searched in the minutes of EB meetings (UNFCCC 2007a) for individual EB members and alternates in each year. Their nationality was then used to create dummy variables indicating host or buyer country representation in the EB. Using PDDs and relevant company websites, we also determine the country of the relevant consultants and equally created a dummy indicating EB membership.

Moreover, to capture the political relevance of a methodology, we created a categorical variable with ranges from 1 (applicability in all countries, i.e. low potential for political competition) to 5 (applicable only in a small number of countries, i.e. high potential for political competition). Thus, the higher the value of the variable, the higher is the political relevance of the decision.

Furthermore, we derived the gap between Annex B countries' Kyoto emission budgets and the projected emission levels during the commitment period. This variable indicates the expected need for CERs. For EU countries, it was based on forecasts by the European Environment Agency (2006), and for Canada and Japan on projections by the U.S. Department of Energy (2007) (only energy-related CO_2 emissions). All remaining information was obtained through linear extrapolations based on UNFCCC inventory data for 2000-2005 (UNFCCC 2007c).

In addition, we merged this data with additional country information on GDP, FDI, trade, CO_2 emissions and education from the World Bank's (2006) World Development Indicators. All these variables are selected for the year 2000, which is the year just before CDM activities started in 2001, and therefore should be the year at which decision makers would orient themselves when considering the power of a country or the relevance of CDM as a complement to FDI. As the variation of this data over the years 2000 to 2006 is negligible as compared to the cross-country variation relevant here, and as information on these variables is taken into account with a lag which may vary from one EB member to the other, we consider that it is misleading to seek additional precision by entering this information for individual years of EB decision making. Using only information for the year 2000 also allows us to impute missing values with values for adjacent years. For tertiary education, for which information was missing for some developing countries even after this replacement

procedure, additional linear imputations were made sequentially using secondary enrolment rates and GDP per capita.

The educational variable might as well serve as proxy for the quality of projects and methodologies. As the RIT assessment is confidential and remains unpublished, an alternative quality control is particularly relevant in the context of projects, rather than methodologies. As discussed above, the Meth Panel assessment is available for methodologies, so that we can retrieve the relevant quality information from the individual meeting reports (UNFCCC, 2007d).

At the project level, considering host country education levels alone may be one option, but does not seem sufficient to control for project quality. As an alternative, we therefore derive a new quality indicator based on a review of all 985 individual PDDs. Since one of the authors is himself a member of the RIT, he knows the standard criteria to be respected and the results of all RIT assessments he carried out himself. The criteria include the credibility of the additionality test implemented by the project, as well as the correctness of the application of the baseline and monitoring methodology. Based on the information available from the PDDs we define a categorical variable with categories from 1 (lowest quality) to 5 (highest quality) for each individual project.

To control for the quality of methodologies, we dispose of two alternative measures: the initial Meth Panel recommendation and the final Meth Panel recommendation. The initial recommendation corresponds to the first Meth Panel assessment prior to any discussion at the EB. If the following EB decision does not lead to a clear approval or rejection, the revised method will is discussed in the Meth Panel again.

The final Meth Panel recommendation is coded as a binary variable taking the value of 1 (method recommended) and 0 (method not recommended). The initial Meth Panel recommendation is coded as a categorical variable assigning 2 if an approval is recommended, 1 if changes are requested, and 0 if a rejection is recommended (corresponding to Meth Panel recommendation categories A,B,C)[1]. .The initial Meth Panel recommendation therefore allows us to discriminate among good, intermediate, and bad methodologies.

We use a similar coding for our dependent variable, i.e. for EB decisions. Again, for methods, we can distinguish three categories (immediately adopted: 2, adopted after revision: 1, rejected or withdrawn: 0). Alternatively, we define a simple binary variable with the two categories “adopted” (1) and “rejected or withdrawn” (0). For projects, the binary decision variable is coded in the same way. However, prior to the final decision, there is a more detailed distinction possible between intermediate categories reflecting requested or imposed reviews as well as correction requests. The scale of the variable ranges from 4 (project registered) to 0 (project rejected or withdrawn).

The distribution of methodologies and projects into the different categories is presented in Table 1.

[1] In two exceptional cases, the initial Meth Panel recommendation is indecisive between B and C. We code these cases as 0.5.

Table 1: EB decision making outcomes for projects and methodologies until 10/2007

Methodologies				Projects			
Approval dummy		Approval categories		Registration dummy		Registration categories	
Approval (1)	107 (45%)	Immediate approval (2)	47 (19.8%)	Registration (1)	824 (94.2%)	Registration (4)	824 (84.5%)
		Approval after revision (1)	60 (25.2%)			Request for review (3)	47 (4.8%)
						Correction request (2)	45 (4.6%)
						Under review (1)	8 (0.8%)
Rejection or withdrawal (0)	131 (55%)	Rejection or withdrawal (0)	131 (55%)	Rejection or withdrawal (0)	51 (5.8%)	Rejection or withdrawal (0)	51 (5.2%)
Total	**238 (100%)**		**238 (100%)**		**875 (100%)**		**975 (100%)**

Note: As opposed to the total number of projects and methodologies stated at the beginning of this section, this table shows only observations for which all necessary information on explanatory variables is available for the subsequent econometric analysis. This leads to the exclusion of one methodology and ten projects.

From Table 1 it becomes immediately apparent that decisions on methodologies have been stricter by far than decisions on individual projects. In fact, only 6% of all projects were rejected whereas this was the case for 55% of the methodologies.

The estimation procedure is predetermined by the type of our dependent variables. For multivariate regressions with the binary and the other categorical variables we use probit and ordered probit regressions respectively. We initially also estimated logit and ordered logit models, but tests on the functional form indicated that the normal distribution yields a better fit.

We expect that observations on projects or methodologies of the same host countries may not be independent. Therefore, we explicitly take into account clusters at the host country level. One might also expect other limitations to the usual independence assumption. For instance, projects by the same buyer or validated by the same auditors may not be fully independent. However, for theoretical reasons (e.g. related to national technology) we expect this problem to be more relevant at the host country level. In addition, there is a large share of unilateral CDM for which buyer countries were not even defined when the EB decision was taken. To avoid an overly complex modeling framework with various overlapping clusters, we thus limit our analysis to the consideration of potential correlations within host countries.

4. Empirical results

4.1. EB decisions on methodologies

Let us first consider EB decision making with respect to CDM methodologies. Table 2 presents our regression results. In Regression 1, we use the binary final Meth Panel recommendation to control for the methodologies' quality. Note that the number of observations is lower for Regression 1 because for 20 methodologies no final Meth Panel recommendation has (yet) been made. This variable is highly significant and, in fact, explains almost all of the variation in our outcome variable. Table 3 shows a cross-tabulation of Meth Panel recommendations and EB decisions. This table demonstrates that indeed, only in three

cases, the two committees show divergent views. Apparently, the EB decision is closely linked to the final Meth Panel recommendation. This implies that hardly any other variable has enough explanatory power to become significant. Only the year of the EB decision shows a significantly negative coefficient indicating that EB decisions have become stricter over time. However, even this variable hardly adds any explanatory power to the overall model in Regression 1.

Considering initial rather than final Meth Panel recommendations and taking into account intermediate values between a clear yes or no (Regressions 2-4), we find more difference between the assessments of the two committees. There are divergent views in 26 cases, whereby the EB tends to be stricter than the Meth Panel (more negative assessments in 19 out of 26 cases).

The replacement of the final by the initial Meth Panel recommendation is the only change between Regression 1 and 2. In Regression 2, host country EB membership now shows a significantly positive impact on methodology approval. Keeping all explanatory variables at their mean host country EB membership increases the predicted probability of a method to be approved by 24.7 percentage points. This result suggests that indeed EB decisions tend to favor methodologies relevant for EB member countries. However, we cannot confirm this result with respect to the buyer countries.

We also find significant coefficients for methodologies developed by international organizations (IO) and by consultants whose governments are represented in the EB. The IO variable has the expected positive impact. IO (i.e. predominantly World Bank) participation increases the predicted probability of approval by 33 percentage points – at the mean of all explanatory variables including the given level of technical and scientific quality, as measured by the initial Meth Panel recommendation.

For consultants whose governments are represented in the EB, the coefficient is negative. At the mean of the explanatory variables, consultants whose governments are represented in the EB have considerably lower the chances of a methodology to be accepted. As opposed to our hypothesis, it appears rather disadvantageous for consultancies if their country has a seat in the EB.

The results above are robust to the inclusion of additional host and buyer country variables. In Regressions 3 and 4 we include FDI inflows as a measure of a country's CDM potential. Yet, it does not have any significant effect on methodology approval. Neither do FDI outflows from the buyer country affect the approval decision. We used GDP as an additional macro variable to assess the power of the buyer and/or host country (not shown). However, this variable was not significant either.

Regression 4 differs from Regression 3 in that it does not use the dichotomous outcome variable, but the variable with ordered categories, which also takes into account intermediate assessments of the EB. Apart from the initial Meth Panel recommendation, most variables are insignificant. The regression is generally less well specified as indicated by a much lower likelihood. If interpreted at all, Regression 4 indicates, that for the first EB decision only the initial Meth Panel recommendation matters. As argued above, the most strongly politically disputed methods seem to be those for which the initial assessment is ambiguous. All of these, however, are now included in the same intermediate category of our dependent variable. This may explain why political factors which were found to be significant in Regressions 2 and 3 are no longer significant.

Table 2: Determinants of methodology approval by the CDM Executive Board

	(1) Probit EB approval yes/no	(2) Probit EB approval yes/no	(3) Probit EB approval yes/no	(4) Ordered probit EB approval 0-2 (2 is directly accepted, 0 is rejected or withdrawn)
Final Meth Panel recommendation	4.98***			
	(0.00)			
Initial Meth Panel recommendation		3.01***	3.04***	2.38***
		(0.00)	(0.00)	(0.00)
Host country is EB member or alternate	0.23	0.64**	0.63**	0.13
	(0.51)	(0.04)	(0.04)	(0.66)
Buyer country is EB member or alternate	-0.60	0.23	0.27	-0.17
	(0.31)	(0.41)	(0.43)	(0.32)
Consultant country is EB member or alternate	0.19	-0.70**	-0.72**	-0.37
	(0.62)	(0.02)	(0.03)	(0.15)
Consultant is an international organization	0.26	0.87**	0.92***	0.13
	(0.67)	(0.04)	(0.01)	(0.72)
Year of decisive EB decision	-0.35***	-0.25**	-0.25*	-0.10
	(0.00)	(0.03)	(0.06)	(0.25)
FDI, net inflows into host country (2000, % of GDP)			-0.03	0.04
			(0.74)	(0.58)
FDI, net outflows from buyer country (2000, % of GDP)			0.00	-0.01
			(0.92)	(0.43)
Constant	697.55***	491.96**	490.96*	
	(0.00)	(0.03)	(0.06)	
Observations	218	238	238	238
Log pseudolikelihood	-13.83	-49.17	-49.10	-105.40
Wald χ^2	151.86	68.37	179.04	300.35
Prob > Wald χ^2	0.00	0.00	0.00	0.00
Pseudo R-Square	0.91	0.70	0.70	0.56
Area under ROC curve	0.99	0.97	0.97	

Notes:
P-values in parentheses (adjusted for host country clusters)
* significant at 10%; ** significant at 5%; *** significant at 1%
The Receiver-Operating Characteristic (ROC) curve jointly depicts the fraction of correctly identified positive values (approvals) and the fraction of correctly identified zero-values (rejections) for different cutoff points. The cutoff point specifies the minimum probability for a prediction of EB approval =1 (See, for example, StataCorp 2005, p. 85).

Table 3: Final Meth Panel recommendation versus EB decision

	EB decision		
Methpanel recommendation	No	Yes	Total
No	122	1	123
Yes	2	93	95
Total	124	94	218

All in all, Table 2 shows mixed evidence of the impact of political-economic variables on EB decisions on methodologies. We do find statistical and economic positive impacts of host country membership in the EB as well as of the consultant being an international organization – at least as soon as we control for effective quality with the initial Meth Panel recommendation. However, for consultants represented by their governments the effect is negative rather than positive. In line with our hypothesis, assessments become stricter over time. The most dominant explanatory variable is our control for the effective quality of the methodology as indicated by the Meth Panel recommendation. Using the final Meth Panel recommendation, we hardly find any other significant result. Only using the initial Meth Panel recommendation, all of the above mentioned political-economic variables become significant.

How can this difference between the impact of the initial and the impact of the final Meth Panel recommendation on the overall regression result be explained? It is likely that final Meth Panel recommendations are not free from political considerations. Indeed, even though the Meth Panel is a body of experts, it is not fully free from EB influence because the chair himself is an EB member, and there are frequent complaints from independent Meth Panel members about this linkage. Therefore, especially when the initial Meth Panel decision is not definitive, effective lobbying might concentrate on the Meth Panel. In fact, to some extent, final Meth Panel recommendations could anticipate the final EB decisions. If this were the case, final Meth Panel recommendations as used in Regression 1 would be endogenous and hence misleading as a control.

We dealt with this problem in various ways. First, we considered to instrument the quality of the methodology with host country tertiary education. However, the correlation between Meth Panel decisions and tertiary education was so low (ρ=0.099) that we decided to abandon this approach. Second, we regressed the Meth Panel recommendation itself on the different political-economic variables introduced in Table 2. While using the final Meth Panel recommendation as the dependent variable leads to significant coefficients for most of these variables, this is not the case when using the initial Meth Panel recommendation. Hence, we consider that , as opposed to the final Meth Panel recommendation, the initial Meth Panel recommendation is a valid control variable for effective quality of methodologies. In turn, this substantiates the results of Regressions 2 and 3.

In our initial hypotheses, we had mentioned one more plausible effect, which we have not discussed so far. This refers to the political relevance of the methodology in terms of its applicability to different countries. This variable does not have any significant effect in our regressions so that we did not introduce it into Table 2. However, it seems to be related to the question whether at all there is divergence between the initial Meth Panel recommendations and the EB assessments. In this context, the direction of the divergence does not seem to matter. Coding a simple dummy variable to indicate divergence and relating it on our variable for political variance in a bivariate logistic regression framework yields a (weakly) significant odds ratio of 1.4 (p-value=0.6, regression not reported here). This implies that the more limited the applicability of the methodology, i.e. the higher the competition effect and thus the political relevance, the higher the chances that some divergence of views arises in the first place.

Summing up our discussion of decision making on methodologies, we can say that the relevance of political-economic variables is mixed. There is clear evidence that – conditional on the initial Meth Panel recommendation – host country EB membership as well as the World Bank influence have a positive impact on the approval of a methodology. Moreover, as expected, decisions have become stricter over time. At the same time, we do not find the

expected effects for buyer country EB membership or consultant country EB membership. Moreover, EB decisions closely follow Meth Panel recommendations, indicating a strong effect of quality. In fact, most of the time EB members do not tend to decide in their own favor or in favor of their constituencies. There is some evidence for an effect of the political relevance of the methodology on whether or not there is divergence of views between the Meth Panel and the EB. Moreover, methodologies for which the EB cannot find a clear decision immediately seem to be the prime target of lobbying activities. Especially in these cases, final Meth Panel decisions also appear to be affected by this lobbying influence.

4.2. EB decisions on individual projects

We will now analyze EB decisions on individual projects, where the transparency of the decision making process is more limited, and see how these deviate from decisions on methodologies. In particular, we note that there is only a small number of rejections as compared to methodologies. Only 5.8 % of all projects, for which a final decision had been taken until October 31, 2007, have been rejected.

In fact, various explanatory variables related to EB membership cannot even be introduced into our multivariate regressions because there is no variance in outcomes. Thus, all 29 projects for which the World Bank was the credit buyer successfully achieved their registration. Similarly, in all 15 cases in which the host country was represented as an alternate EB member, the corresponding projects were registered. And finally, in all 7 cases in which the validator's government was represented in the EB, projects were registered, too.

Moving beyond descriptive statistics we present the results of our more general econometric assessment in Table 4. Even though the rejection rate is relatively small, we stick to traditional probit estimations. An alternative procedure could be to explicitly consider our data as rare events data and to carry out a case control study which introduces a selection on the dependent variable prior to estimation and tends to perform better in Monte Carlo simulations (King and Zeng 2001). However, this procedure is generally suggested only for datasets in which one of the two occurrences is below 5% and in which the total number of observations is relatively small.

One of the major econometric concerns is how to properly control for the effective quality of a project. Using host country tertiary enrolment rates as a proxy (Regression 5) does not show any significant relationship with EB decision making – a result which leaves us with some doubts about the adequacy of this variable for this purpose, and thus about this regression specification as a whole. Measures of fit for the overall regression are extremely low as well. In all other regressions, we use the assessment of project quality in line with RIT criteria as described in Section 3. This variable is highly significant throughout all further models (Regressions 6 to 9) and considerably increases their fit. It seems to capture the actual effect of quality rather well.

Host country EB membership turns out to be positively significant in regressions which properly control for effective project quality. Marginal effects displayed in Regression 7 suggest that host country membership increases the predicted probability of a project to be registered by about 4.4 percentage points (evaluated at the mean of the explanatory variables). This is a rather small effect in terms of its absolute value. The size of the effect is reduced even further, when other host country variables are taken into account (see Regression 8). One

Table 4: Determinants of project registration by the CDM Executive Board

	(5) Probit	(6) Probit	(7) Probit	(8) Probit	(9) Ordered probit
	EB final decision (yes=1, no=0)	EB final decision (yes=1, no=0)	EB final decision (yes=1, no=0)	EB final decision (yes=1, no=0)	EB decisions, 0-4 (4: directly accepted, 0: rejected or withdrawn)
Host country tertiary enrolment (2000, % gross)	0.01			0.02/1.15 e-04	0.01
	(0.31)			(0.11)	(0.37)
Project quality		0.93***	0.93/0.013***	1.09/0.005***	0.51***
		(0.00)	(0.00)	(0.00)	(0.00)
Host country is EB member or alternate	0.45	1.35***	1.39/0.044***	0.53/0.003*	0.78***
	(0.11)	(0.00)	(0.00)	(0.07)	(0.00)
Buyer country is EB member or alternate	0.51	0.54			
	(0.16)	(0.14)			
Buyer country is EB member/alternate or IO			0.66/0.006*	0.53/0.002	0.21
			(0.08)	(0.12)	(0.35)
Year of EB decision	-0.49***	-0.63***	-0.61/-0.009***	-0.78/-0.004**	-1.12***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Small project				0.50/0.002*	0.20
				(0.09)	(0.33)
Kyoto gap (predicted, 2008-2012, kt CO_2 eq.)				1.18/0.005**	0.22
				(0.04)	(0.46)
FDI, net outflows from buyer country (2000, % of GDP)				0.01/6.59 e-05	0.002
				(0.22)	(0.74)
FDI, net inflows into host country (2000, % of GDP)				-0.14/-0.001***	-0.07*
				(0.01)	(0.05)
Trade (imports+exports of host country, 2000,% of GDP				-0.01/-2.83 e-05*	-0.001
				(0.08)	(0.46)
Host country CO_2 emissions 2000 (kt)				0.00/3.03e-09***	0.000
				(0.00)	(0.49)
Constant	990.05***	1,252.94***	1,229.45***	1,558.70**	
	(0.00)	(0.00)	(0.00)	(0.01)	
Observations	875	875	875	875	975
Log pseudolikelihood	-180.49	-123.85	-122.76	-111.18	-491.00
Wald χ^2	13.26	133.35	140.86	839.35	342.28
Prob > Wald χ^2	0.01	0.00	0.00	0.00	0.00
Pseudo R-Square	0.07	0.36	0.37	0.43	0.19
Area under ROC curve	0.69	0.92	0.92	0.94	

P-values in parentheses (adjusted for host country clusters)
* significant at 10%; ** significant at 5%; *** significant at 1%
[+] For Regressions 11 and 12 marginal effects are presented in addition to coefficient estimates. They are evaluated at the mean of the explanatory variables. For the variables "Host country is EB member or alternate", "Buyer country is EB member/alternate or IO" and "Small project" dF/dx stands for the discrete change of the dummy variable from 0 to 1. P>|z| corresponds to the test of the underlying coefficient being 0.

should note, however, that the values for the estimated constant are extremely high. This is due to the low rejection rates for projects. High values for the constant imply high predicted probabilities of registration at the mean of all explanatory variables, which are close to 1 in our sample. Hence, marginal effects (as well as the effects for the discrete change of the dummy variable from 0 to 1) are estimated to be fairly small, even though they are highly significant in statistical terms.

Buyer country EB membership shows a positive coefficient as well, which becomes significant or close to significant in most regressions. It is in fact significant at the 10% level in Regression 7 where buyer country EB membership and the buyer being an IO are considered jointly in a single dummy variable. As the IO variable cannot be controlled for separately in the regression, looking at buyer country membership alone includes IO buyers in the control group and therefore blurs the result. This is avoided by the use of the joint dummy variable. Nevertheless, even in Regression 7, the size of the effect is rather small.

Just as in the case of methodologies, we also find that EB decisions have become stricter over time. This result is highly significant across all regression specifications.

In Regression 8, we find evidence for the importance of variables indicating the economic relevance of the project – in general, as well as for the host or buyer country individually. With respect to project size, we supposed that small projects do not lead to relevant competition effects. Hence, we expected them to be registered more easily. Indeed, Regression 8 shows that small projects have a significantly higher chance to be registered. Moreover, the potential demand for certified emission reductions affects EB decisions as well. If a buyer country's Kyoto gap is large, i.e. its need for the CDM is high, its chances to have its projects registered by the EB increase. Finally, we look at the potential supply of certified emission reductions. The overall amount of CO_2 emissions of a host country, which relates to the economic potential of the CDM, is also positively related to projects being registered.

There are two political-economic variables, which show coefficients that contradict our initial expectations. We supposed that host country FDI inflow, indicating host country attractiveness for investments, and trade-openness as a measure of host country attractiveness in the international arena, would affect project registration positively. However, we find significant negative effects. Most plausibly, this can be explained by the relevance of the unilateral CDM. Unilateral CDM may open up new possibilities for countries willing to attract a higher share of international investment, but not yet achieving this goal. An example could be India where, at the turn of the century, FDI and trade involvement were relatively limited, but which is opening up and can now make use of the unilateral CDM as some kind of a marketing tool to attract more FDI in the future.

Generally, the results discussed above are less pronounced in the ordered probit regression. Only project quality, the year of decision making and host country FDI inflows remain significant. This is the case despite the higher number of observations available for the analysis in Regression 9. But this higher number is achieved by taking into account projects for which no final decision has been taken and which are still under review or correction. Here, we should recall that the categories of our categorical dependent variable are based on a simple assessment of probabilities for projects to eventually be registered if they have to undergo such intermediate evaluation or revision processes. Our dependent variable may therefore not always capture the situation correctly, which would explain the rather imprecise regression results.

Comparing the different regression specifications, the best fit of the data to the model is achieved in Regression 8. In this regression, the different political-economic variables concerning EB membership, the variables relating to the economic potential of projects, and the effective quality control variable explain EB decision making rather well. We are confident that these explanatory variables cover the most important determinants of EB decision making. Ramsey's Reset tests[2] for the probit models in Table 5 are satisfactory except for Regression 5, which does not directly control for project quality. For the other regressions, the squared predicted values are never significant (not even at the 10% level) while the plain predicted values are highly significant. Leaving out the political-economic variables, the test indicates that important information is missing.

Summing up our discussion of individual project decisions we find non-negligible evidence for almost all of our initial political-economic hypotheses. Although results are not always significant in all relevant specifications and the size of the effects is often rather small, the overall picture provides a rather convincing evidence of the relevance of various political-economic factors for EB decision making. Especially with respect to the variables related to EB membership, the results show that individual projects are subject to political influence in general. In addition, some relevant political-economic variables could not even be introduced into our regression models as they perfectly predicted success.

The overall picture of political-economic influence is thus more consistent here than in the context of EB decisions on methodologies. This in turn is consistent with our hypothesis that due to the lack of transparency for decisions on individual projects political-economic factors matter more for EB decisions on individual projects than for decisions on methodologies. Obviously, given the high overall registration rates for CDM projects, the absolute value of the observed marginal effects is much lower for projects. Finally we observe that along with political-economic considerations, for projects just as for methodologies, the impact of quality on EB decisions is also very strong.

5. Conclusions

Based on our econometric analysis of EB decision making over almost 1000 individual CDM projects and 250 methodologies, we find that the EB is strongly committed to quality criteria. At the same time, our results suggest that a number of political-economic variables also drive outcomes of EB decision making. This is in line with our theoretical hypotheses.

More specifically, we find that EB decisions tend to favor projects relevant for EB member countries (Hypothesis 1). This is the case for both host and buyer countries, whereby the role of the former is more clearly significant. For methodologies, only the host country influence is significant.

There is mixed evidence for our hypothesis that countries for which the CDM has a high potential and countries which are generally powerful players have a higher chance to see their projects and methodologies accepted by the EB (Hypothesis 2). For CDM projects we observe that host countries with a high overall level of CO_2 emissions (and thus a high potential for

[2] In the basic version of Ramsey's Reset test which is used here, the dependent variable is regressed on its own predicted values from the main regression and their squares. If the initial model is well specified, the coefficient of the predicted values should be highly significant while the square term should not contain any additional information and thus be insignificant.

CDM investments) seem to be able to obtain registration for a higher share of their projects. At the same time, host FDI inflows and trade openness do not improve the probability of projects to be registered. For methodologies FDI inflows do not matter either.

For projects and methodologies alike, the involvement of the World Bank as a powerful international player improves the probability of success (Hypothesis 3). The effect of transparency of the decision making process could not directly be tested, but there are some indications for its relevance (Hypothesis 4). Political-economic considerations are generally more clearly significant for EB decisions on individual projects than for methodologies. In our argumentation, this has been linked to the lack of transparency about the decision making process on individual projects (including the lack of transparency about the initial RIT recommendation).

In addition, political-economic considerations appear to be more important for those methodologies which are relevant only for a limited number of countries and for big projects (Hypothesis 5). Project regressions clearly show that small projects are registered more easily, i.e. without much critical discussion. And in the context of methodologies, we find at least some weak evidence that divergent assessments of the Meth Panel and the EB are observed more frequently when the methodology gives rise to competition so that the decision is of higher economic and political relevance.

Finally, for both methodologies and projects, there is highly consistent evidence that EB decision making has become stricter over time (Hypothesis 6) along with the increase in the stock of methodologies and projects already approved.

As the EB is a rather new institution, its functioning may still be subject to change. This leads us to reflect also upon potential institutional improvements, which our analysis may suggest. Firstly, it has to be recalled that the existing system seems to function rather well. This is the case because the predominant determinant of EB decisions appears to be quality. Nevertheless, the impact of the political-economic variables is clearly significant. Let us consider the potential relevance of these variables in the context of institutional reform.

Time dependency, in the sense that initially, EB decision making tended to be less strict than in more recent times, does not seem to present any further problem for the future. Now that the CDM has become a widely used mechanism, no fall-back has to be expected.

The influence of IOs and of other economic and EB membership variables, can, however give rise to some concern. With respect to methodologies, potential lobbying after initial decisions for revision calls for further analysis. If necessary, institutional safeguards have to be put in place to limit the impact of lobbying. One recommendation for the procedure on registration of individual projects could be to increase transparency. This would also imply a publication of the initial scientific or technical assessments of the RIT.

References

Barrow, Robert and Jong-Wha Lee (2005): IMF Programs: Who Is Chosen and What Are the Effects?, in: *Journal of Monetary Economics* 52(7): 1245-1269.

CDM Watch (2005): Der Clean Development Mechanism (CDM) als Option in der Klimapolitik der Schweiz (The CDM as an option in Swiss climate policy), Study commissioned by Greenpeace, http://www.greenpeace.ch/fileadmin/user_upload/Downloads/de/Klima/cdm_studie.pdf (accessed Jan 23, 2008), Zurich.

European Environment Agency (2006): Greenhouse Gas Emission Trends and Projections in Europe 2006, EEA Report 9/2006, Copenhagen.

Fleck, Robert and Christopher Kilby (2006): World Bank Independence: a Model and Statistical Analysis of U.S. Influence", in: *Review of Development Economics* 10(2): 224-40.

King, Gary and Langche Zeng (2001): Logistic Regression in Rare Events Data, in: *Political Analysis* 9(2): 137-63.

Michaelowa, Axel and Katharina Michaelowa (2007): Climate or Development: Is ODA Diverted from Its Original Purpose?, in: *Climatic Change* 84(1): 5-22 .

StataCorp (2005): Logistic Postestimation, in: Stata Base Reference Manual, volume 2, K-Q, release 9, College Station, Texas: Stata Press.

UNFCCC (2006): Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol on its first session, held at Montreal from 28 November to 10 December 2005, Addendum, Part Two: Action taken by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session, FCCC/KP/CMP/2005/8/Add.1, Bonn.

UNFCCC (2007a): EB Meetings, http://cdm.unfccc.int/EB/index.html (accessed Jan 23, 2008).

UNFCCC (2007b): Project Activities, http://cdm.unfccc.int/Projects/index.html (accessed Jan 23, 2008).

UNFCCC (2007c): GHGs without LULUCF, http://unfccc.int/files/ghg_emissions_data/applications/x-zip-compressed/ai_total_wolulucf.zip (accessed Jan 23, 2008).

UNFCCC (2007d): Baseline and Monitoring Methodologies, http://cdm.unfccc.int/methodologies/index.html (accessed Jan 23, 2008).

URC (2007): Welcome to the UNEP Risoe CDM/JI Pipeline Analysis and Database, http://www.cdmpipeline.org/ (accessed Nov 5, 2007).

U.S. Department of Energy, Energy Information Administration (2007): International Energy Outlook 2007, Washington.

World Bank (2006): World Development Indicators, CD Rom, Washington.

World Bank (2007): Carbon Finance for Sustainable Development 2007, Washington.

WWF (2007): WWF background note to the report "Is the CDM fulfilling its environmental objectives? An evaluation of the CDM and options for improvement" prepared for WWF by the Öko-Institut November 2007, http://assets.panda.org/downloads/cdm_report_wwf_background_paper.pdf (accessed Jan 23, 2008), Berlin.

Annex 1: Rules on the transparency of EB decision making

E. Transparency
Rule 26

Subject to the need to protect confidential information, the principle of transparency should apply to all the work of the Executive Board, encompassing the timely public availability of documentation and channels through which external comments by all Parties and all UNFCCC accredited observers and stakeholders can be submitted for consideration by the Board. The posting of the Board's meetings on the Internet is one way to ensure transparency.

F. Attendance
Rule 27

Paragraph 16 of the CDM modalities and procedures:
1. Meetings of the Executive Board shall be open to attendance, as observers, by all Parties and by all UNFCCC accredited observers and stakeholders, except where otherwise decided by the Executive Board.
2. In the context of paragraph 1 above, the Executive Board may decide, in the interest of economy and efficiency, to limit attendance at its meetings to members, alternate members and secretariat support staff. In such instances, the Executive Board shall take all practicable steps to accommodate in other ways the interests of Parties, non-Parties to the Kyoto Protocol that are Parties to the Convention and accredited UNFCCC observers and stakeholders to observe its proceedings, except when the Executive Board decides to close all or a portion of a meeting.

Source: UNFCCC 2006, Decision 4/CMP.1, Annex I, rules 26 and 27, p. 38.

List of variables

Short Description and summary statistics of most important variables for Methodologies

Variable	Additional Description	Mean	S.D.	Median	Lower	Upper	Source
EB approval yes/no	Approval by EB: 0 - no or withdrawn , 1 - approved	0.45	0.50	0	0	1	URC (2007)
EB approval 0-2	Approval by EB: 0 - no or withdrawn , 1 - accepted after revision , 2 - accepted immediately	0.65	0.79	0	0	2	URC (2007)
Year of decisive EB decision				2005	2003	2007	URC (2007)
Meth Panel recommendation	Recommendation by Meth Panel: 0 - C , 1 - A (decisive decison)	0.44	0.50	0	0	1	UNFCCC (2007b)
Initial Meth Panel recommendation	Mark of initial Meth Panel assessment: 0 - C , 0.5 - B/C , 1 - B , 2 - A	0.82	0.80	1	0	2	UNFCCC (2007b)
Host country is EB member or alternate		0.47	0.50	0	0	1	URC (2007) & UNFCCC (2007b)
Buyer country is EB member or alternate		0.22	0.42	0	0	1	URC (2007) & UNFCCC (2007b)
Consultant country is EB member or alternate		0.42	0.49	0	0	1	URC (2007) & UNFCCC (2007b)
Consultant is an international organization		0.07	0.25	0	0	1	URC (2007) & UNFCCC (2007b)
FDI, net inflows into host country	host country net FDI inflows in % of GDP (2000)	2.91	2.21	2.86	-2.76	9.86	World Bank (2006)
FDI, net outflows from buyer country	buyer country net FDI outflows in % of GDP (2000)	3.54	6.80	0	0	20.10	World Bank (2006)
Trade	buyer country tradeshare (imports + exports) in % of GDP (2000)	24.49	38.93	0	0	130	World Bank (2006)
marks by Meth Panel	Recommendations: A- approval , B - changes required , C - new PDD shall be submitted						URC (2007) & UNFCCC (2007b)

Short description and summary statistics of most important variables for Projects

Variable	Short Description	Mean	S.D.	Median	Lower	Upper	Source
EB final decision yes/no	Registration by EB: 0 - not registered or withdrawn , 1 - registered	0.94	0.23	1	0	4	URC (2007)
EB decisions 0-4	Registration by EB: 0 - not registered or withdrawn , 1 - under review, 2 - correction request, 3 - request review, 4 - registered	3.63	1.00	4	0	1	URC (2007)
Green House Gas reduction	Green House Gas reductions of project in ktCO2 equivalent reductions per year	196.90	843.51	38	0.6	10437	URC (2007)
Small project	dummy for small project	0.48	0.50	0	0	1	UNFCCC (2007b)
yearEBdecision	year of decisive EB decision			2006	2004	2007	URC (2007) & UNFCCC (2007b)
project quality	external assessment of project quality: 1 - lowest , 5 - highest	3.01	1.42	3	1	5	External Assessment
Host country is EB member or alternate		0.63	0.48	1	0	1	URC (2007) & UNFCCC (2007b)
Buyer country is EB member or alternate		0.18	0.39	0	0	1	URC (2007) & UNFCCC (2007b)
Buyer country is EB member or alternate or international organization		0.21	0.41	0	0	1	URC (2007) & UNFCCC (2007b)
FDI, net inflows into host country	host country net FDI inflows in % of GDP (2000)	2.67	2.01	2.94	-2.76	9.86	World Bank (2006)
FDI, net outflows from buyer country	buyer country net FDI outflows in % of GDP (2000)	7.79	8.44	0.66	0	20.1	World Bank (2006)
Trade	buyer country tradeshare (imports + exports) in % of GDP (2000)	48.99	38.28	28.54	22.40	228.875	World Bank (2006)
Host tertiary enrollment	host coountry gross tertiary enrollment rate (2000)	16.23	11.84	10.20	0.13	72.60	World Bank (2006)
Host CO2 emmissions	host country CO2 emission in kt (2000)	928039	880186	1158641	161.22	2767397	World Bank (2006)
Kyoto gap	buyer country target gap to Kyoto protocol promises	40.95	281.09	0	-243	1260	EEA (2006), U.S. Dep. of Energy (2007), UNFCCC (2007b)