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DOI: <https://doi.org/10.1007/s10784-016-9319-8>

Posted at the Zurich Open Repository and Archive, University of Zurich

ZORA URL: <https://doi.org/10.5167/uzh-136656>

Journal Article

Accepted Version

Originally published at:

Michaelowa, Katharina; Michaelowa, Axel (2017). The growing influence of the UNFCCC Secretariat on the clean development mechanism. *International Environmental Agreements: Politics, Law and Economics*, 17(2):247-269.

DOI: <https://doi.org/10.1007/s10784-016-9319-8>

The growing influence of the UNFCCC Secretariat on the Clean Development Mechanism

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This is the authors' accepted manuscript. The article was published as: Katharina Michaelowa and Axel Michaelowa: The Growing Influence of the UNFCCC Secretariat on the Clean Development Mechanism, in: International Environmental Agreements Vol. 17, No. 2, 2017, pp. 247–269. <https://link.springer.com/article/10.1007/s10784-016-9319-8>.

Abstract

Using principal–agent theory, we explain the effect of an exogenous increase in financial resources on the autonomy of international bureaucracies. This can be empirically demonstrated at the example of the unexpectedly large inflow of fees for the registration of clean development mechanism (CDM) projects and issuance of emission credits on the political influence of staff in the UNFCCC Secretariat. Through document analysis, interviews and econometric analysis, we show that CDM staff was able to gain substantial influence over concrete policy decisions and even change the structure of relevant decision-making and consultation processes. We also show that this may reinforce rather than reduce the role of special interests expressed via country representatives in the CDM Executive Board. While one might be worried about the erosion of democratic principles at the international level, from a normative perspective, the overall effect is difficult to assess. If the international civil service is competent and committed to the delivery of the global public good, its increasing autonomy and influence may also be socially advantageous.

Keywords

International bureaucracy, Principal–agent model, UNFCCC, CDM, Delegation

The growing influence of the UNFCCC Secretariat on the Clean Development Mechanism

1. Introduction

Secretariats of international organizations play a crucial role in international diplomacy. They prepare agendas and documents, support the management of the negotiation rounds and provide background information to members of committees, delegates and other participants. Despite their technocratic appearance, they may gain considerable influence on actual policy decisions. Activities of international bureaucracies¹ have thus attracted increasing academic interest (see e.g. Hawkins et al. 2006b; Johnson 2013; Johnson and Urpelainen 2014; Vaubel 2006). We examine the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) (henceforth “the Secretariat”) and the development of its role in response to an increase in resources. Our analysis, to our knowledge, provides the first empirical case study that allows for an econometric test of principal-agent theory. Our data are unique in that they allow us to measure a resource increase exogenous to deliberate decisions by the principal. This is crucial for our empirical identification strategy.

Previous studies on the initial role of the Secretariat provide us with a sound basis for our analysis. Depledge (2005, 2007) and Yamin and Depledge (2005) offer a detailed account and discussion of the Secretariat’s tasks and activities, and Busch (2009) analyzes the UNFCCC Secretariat within the comparative theoretical framework for different environmental treaty secretariats provided by Biermann and Siebenhüner (2009).

¹ According to Biermann and Siebenhüner (2009, p. 7) an international bureaucracy is a “hierarchically organized group of civil servants who are expected to act following the mandate of the organization and the decisions of the assembly of member states”..

2. Principal-agent interactions when international secretariats grow

For the principal-agent model to be a useful theoretical framework of our analysis, we first need to specify a bureaucratic objective function that is sufficiently concrete to allow meaningful predictions of staff behavior. Second, we need to conceive a dynamic version of the model that allows for revisions of the initial delegation decision in order to reflect the development of bureaucratic influence over time, notably at the event of external shocks such as an unexpected additional flow of financial resources, new information, or a change in public perception.

There is no consensus on the appropriate specification of the arguments in the bureaucratic utility function (Alesina and Tabellini 2007, p. 173). Scholars typically consider that bureaucracies strive for resources (Niskanen 1971, 1975; Migué and Bélanger 1974, Vaubel 2006), excellence (Alesina and Tabellini 2007; Barnett and Finnemore 1999, 2004) and autonomy (Barnett and Finnemore 2004, Hawkins et al. 2006a), whereby each of these objectives are considered as goals in their own right and / or as instrumental to achieve the two other objectives.

For our purposes, the most important objective to consider is autonomy. We follow Hawkins et al. (2006a, p. 8) in defining autonomy more broadly than discretion, a term that is used to refer to autonomy within the restricted area of explicitly delegated activities. Autonomy implies some freedom for independent action and thereby eventually, some influence on actual policy outcomes. It is precisely this influence on policy outcomes, which we are primarily interested in in this paper.

Autonomy enables the bureaucracy to more easily follow whatever objectives it may have, even if they are opposed to those of the principals. From this perspective, it is a logical implication of the principal-agent model itself that bureaucrats should value autonomy. While resources and excellence may be objectives in their own right, we consider them here primarily as instrumental

to obtain autonomy, enabling staff to convince principals that further delegation may be a good thing to do.

The idea that principals can be convinced to adjust their delegation decision is based on the assumption that the principals' interests and priorities may change over time, or that they may appear different in the light of additional information. Traditional principal-agent models typically ignore these dynamics (Stone 2011, p. 26).² The adjustment of the principals' beliefs about how much authority they should delegate would rather be discussed in a constructivist framework. Yet the two can be fruitfully married here, since the adjustment of priorities may well be a very rational choice by principals, notably in the context of imperfect information that the principal-agent model supposes anyway, and thus in line with the general assumptions of this model.

From this perspective, delegation of autonomy is not a once and for all decision, but is subject to constant adjustments either through the reinterpretation or through the formal revision of existing rules. Principals decide (and re-decide) based on an ongoing optimization between the reduction of their own workload and improved outcomes due to the use of bureaucratic expertise on the one hand, and the cost of engaging the bureaucracy on the other hand. For government representatives (or other national delegates) the consideration of cost does not only include the direct financial cost of maintaining an international civil service, but also the political cost of potentially undesirable bureaucratic decisions. Principals are induced to accept or even actively promote greater bureaucratic autonomy if they can be convinced that on balance, the independent activities of the bureaucracy are more beneficial (or less costly) than they thought. This may be influenced by staff itself, for instance, if they draw attention to the complexity of the tasks, implying the need for expert knowledge, and simultaneously demonstrate their own competence. In addition,

² A notable exception in a similar context as ours is Hawkins and Jacoby (2006) although they do not explicitly mark this theoretical break.

staff can induce more implicit changes in the degree of delegation, i.e., when change is gradually creeping in or willingly obfuscated, e.g., if decisions about relevant procedural rules are hidden in the midst of complicated technicalities.

Now imagine an external shock as described above. This shock affects the staff's ability to influence the principals. The bureaucracy can use new resources to enhance its capacity and the actual and / or perceived quality of its services. Thus, by hiring competent staff, the secretariat may more easily convince the principals that it is worthwhile to leave relevant tasks in its responsibility. Moreover, with increased staff, it can more easily take the time to carefully draft propositions in a way to increase its own procedural rights without anyone noticing, or it may simply overwhelm the principals with so many issues to decide upon that they cannot help but delegate some of these decisions (or their preparation) back to the secretariat. Generally speaking, with increasing resources, a bureaucracy disposes of greater means to increase pressure for more autonomy, and greater means to show competence. This should enable the bureaucracy to extend the compelling offer to reduce the workload of principals thereby enhancing its own freedom of action and its impact on actual decision making (see Figure 1).

Figure 1 about here

Apart from the dynamics we introduce into the model, there is one more way in which we wish to deviate from the traditional discussion of the principal-agent relationship. The principal-agent model usually adopts the normative perspective of the principals. In our context, this does not necessarily make sense because the principal-agent relationship we observe is only a subset of a wider hierarchical principal-agent framework, and the interests of national delegates at international organizations may themselves largely deviate from the interests of the ultimate principal, namely the population in the member countries. Thus we could observe situations in

which the national delegates willingly delegate more authority to the secretariat to reduce their own workload, while the general public would have preferred these issues to be decided at a political level. In other situations, political positions of national delegates may be driven by narrow vested interest, in which case the general public would prefer an international bureaucracy dedicated to the delivery of the global public good (i.e. to the central goal of the organization) to take over responsibility.

In brief, this implies that unless we take the whole picture into account (which goes beyond the scope of this analysis), a normative judgment cannot be made. In the following, we thus concentrate on a positive analysis and only hint to the potential normative implications here and there without the intention to be conclusive in this respect.

3. The UNFCCC – theoretical aspects of influence of resource growth on its autonomy

The UNFCCC presents a useful case study because the literature provides ample evidence about its initial set-up, the initial delegation to the Secretariat, and the role the Secretariat was supposed to play when the organization was put in place. This provides us with a sound baseline and starting point for the analysis at hand. Moreover, we can clearly distinguish between budgetary resources allocated to the Secretariat in the framework of the delegation of tasks (the financial means deemed necessary for the Secretariat to carry out its tasks) and additional external resource flows. The ability to observe exogenous resource inflows is important to disentangle cause and effect, i.e., to credibly estimate the impact of resource growth on the development of staff autonomy and influence within the political decision making process.

3.1. *Initial delegation to the UNFCCC Secretariat*

When policy issues are politically highly contentious, member countries generally avoid delegation to international bureaucracies (Stone 2011). This is the case for climate change. The unanimous assessment of the literature is that the Secretariat's autonomy initially was extremely limited and its role restricted to very technical tasks (UNFCCC 1992³, Bauer et al. 2009, Busch 2009, Biermann et al. 2009 Depledge 2005). None of the authors seems to believe that the Secretariat's role would see significant changes in the future and that the Secretariat would itself even try to make it change. However, according to principal-agent theory (see Figure 1), the Secretariat will try to gradually enhance its autonomy by exerting some influence on the principals. Even if it cannot induce change through its own initiative, this could be facilitated through an external shock.

We do indeed observe a significant, externally induced growth in resources that was fully unexpected for member countries and the Secretariat alike.

3.2. *The development of UNFCCC resources*

The first budget of the Secretariat, for the biennium 1996/1997 shows expenditures of about 4.5 million USD per year. Until 2012 it increased almost twenty-fold (see Figure 2). The general growth in resources is matched by the growth in staff members. In January 1995, just before the first Conference of the Parties the Secretariat had 34 staff members on 20 professional and 14 administrative positions (Depledge 2005, p. 63). Ever since, it has seen a dramatic growth, increasing on average by 18% per year, so that in mid-2012, the Secretariat had a total of 494.5 positions (307 professional level and 187.5 administrative posts).

Figure 2 about here

³ Art. 8 of the UNFCCC lists the tasks of the Secretariat. Art. 14 of the Kyoto Protocol (UNFCCC 1997) specifies that the Secretariat exercises the same functions under the Protocol as under the UNFCCC.

We can distinguish two specific periods of major growth, namely the initial phase until 2001, and the period after 2005. While the first period corresponds to the initial phase of setting up the general institutional structure, the second growth phase (see Figure 2) is almost exclusively driven by a very specific, relatively technical sub-sector of the Secretariat's activities, namely activities related to the Clean Development Mechanism (CDM)⁴ that allows developers of emissions mitigation projects in developing countries to sell emission credits (Certified Emission Reductions, CERs) to industrialized countries. While the UNFCCC core budget increased only moderately, additional trust funds were created for several new activities, of which the CDM trust fund was clearly the most important one with a budget exceeding the core budget by almost 25% in 2012 (see Annex 1, Table A1).

The CDM trust fund opened in 2008 and was financed through the fee to be paid on individual CDM projects ("share of proceeds to cover administrative expenses"). As the CDM attracted significant demand by private and public entities across the world, inflows to the CDM trust fund rose considerably and far beyond expectations. Predictions by the Secretariat in 2002 (UNFCCC 2002a, Annex 2), on which the project-fee was based, considered about 100 projects per year whereas the actual number of requests for project registration triggering the payment quickly exceeded 500 per year (UNEP Riso Centre 2012). Moreover, within the unexpectedly high number of projects, more projects than initially expected were extremely large industrial gas projects thereby generating millions of CERs and related fees.

Resources came in so rapidly that they could not even be effectively used at the same speed. By 30 June 2012, the accumulated surplus of the CDM trust fund was at 131.2 million USD

⁴ The CDM was set up under Art. 12 of the Kyoto Protocol (UNFCCC 1997a), and Art. 12,4 specifies that it is to be supervised by an Executive Board (EB). Para 19 of decision 3/CMP1 (UNFCCC 2005b) specifies that the Secretariat shall serve the EB

(without counting an additional operating reserve of 45 million USD), i.e. about three times the current annual expenditure financed out of this fund (UNFCCC 2012a, p. 8)

It should be noted that the Secretariat was not able to reallocate these resources to other areas of activity. Indeed the political agreement on the fee for CDM projects came along with a notable institutional regulation in the Kyoto Protocol (Article 12, Paragraph 8), namely the obligation to use these funds exclusively for this particular area of activities, rather than for cross-subsidies within the Secretariat. The basic idea was that a fee levied from projects in developing countries (and thus reducing the income these countries may have through the CDM) should not be used for purposes benefitting primarily the industrialized countries (e.g. by helping them to achieve their emission reduction targets). Thus, even when the mechanism turned out to function unexpectedly well in terms of the size of the new market that had been generated, the accumulated funds could only be used in the same area and not channeled into other fields of activities. This led to the dramatic growth of the CDM part relative to other fields within the UNFCCC.⁵ In 2012, the volume of CDM staff and expenditures corresponded approximately to total UNFCCC resources in 2005.

Summing up, we would like to reemphasize that the strong increase in financial resources for the CDM was not the result of a deliberate political decision but was related to unexpectedly strong market demand for CDM projects, and can thus be considered as exogenous to the political process.

⁵ While there was an initial agreement that the share of proceeds should be adjusted once enough funding to cover administrative cost would be available (UNFCCC 2005a, para 38), this appears to have been overlooked, and the Secretariat seems to have never alerted anyone regarding this clause. Moreover, individual member countries formally had the right to claim back their contributions from the times before the project fees were introduced. Again, this has never been requested.

3.3. *Hypotheses on the effect of resource growth on bureaucratic behavior*

Our theoretical framework suggests that external resource flows will indeed provide an opportunity for the international bureaucracy to influence its principals more effectively. This may be reinforced by the fact that the external resources allocated to the Secretariat make the international bureaucracy weigh less heavily on the member countries' budget, which directly influences the principals' balance between the cost and benefits of delegation. For both reasons, the principals can be expected to rely more heavily on the bureaucracy and to delegate more responsibilities.

As observed above, the dramatic growth of resources did not occur in the politically most disputed core activities of the UNFCCC, which, as a consequence, are no more the actual focus of the Secretariat's staff and financial resources. With the dominance of the CDM, the Secretariat may have found a new and less controversial policy area for its interventions. Indeed, at least after some initial discussions, consensus about the general benefits of a well-functioning market for CERs was achieved. Of course, there are discussions about the quality of individual methodologies for CDM projects and about the quality of the projects themselves (see Michaelowa 2005). In specific cases, individual countries may have strong preferences for certain projects or methodologies expected to benefit their national economy or some national firms (see Flues et al. 2010). But in terms of political salience this is not comparable to the conflicting views on emission reductions and on national responsibilities for the mitigation of and adaptation to global climate change. Moreover, decisions in the context of the CDM are generally highly technical. While they are less dependent on advanced scientific research than the overall questions of global climate change, they demand the exact knowledge of a number of technical measurement rules, of prior decisions, and, perhaps even more importantly, of each individual project and methodology proposed. Given that the number of methods and projects submitted is substantial - reaching several dozens of methods and

up to a thousand projects in a single year - it is plausible to assume that the responsible political body, the CDM Executive Board (EB) will be overburdened and count increasingly on the suggestions of the Secretariat. This should increase the Secretariat's influence on all decisions regarding the CDM. The change in influence could remain fully unofficial keeping up the "veil of legitimacy" and the "invisibility" of the Secretariat (Depledge 2005, p. 62 and 66). But it could also be at least partially rendered official if the EB members recognize the impossibility of their task. This would imply a change in specific rules and regulations.

On this basis, we can formulate two general hypotheses that can be directly tested in the following:

First, we expect to see an impact of resource growth on actual decision making within the responsible political body for the CDM, i.e., the EB. The EB casts the CDM-related generic decisions of the Conference of the Parties into specific rules. Moreover, it is responsible for the approval of CDM methodologies, and decides about the registration of CDM projects and the issuance of related credits. As CDM project registration and corresponding CERs lead to (further) increased resources for the Secretariat, the Secretariat should have an incentive to use its rising influence to promote and protect the CDM. If our theoretical conjecture is correct, the Secretariat's increased resources should lead to less rejections of project registration and credit issuance.

Second, we expect that the Secretariat will make use of enhanced resources to actively promote its influence on the EB. This issue can be examined in the context of the Secretariat's role in preparing EB meetings. If our theoretical conjecture is correct, we should expect the Secretariat to prepare the meetings in a way that renders its own administrative capacity and its expertise more and more indispensable. In this context, it may, for instance, actively add further complexity to the EB decisions by proposing new items for the EB agenda. Such agendas require an even higher share of the members' time, or, alternatively, stronger delegation to the Secretariat.

4. Empirical evidence for changes in the Secretariat's influence

To assess the plausibility of the different theoretical conjectures, we initially carried out five expert interviews with respondents from the Secretariat, country delegations, the EB, and the Methodologies Panel (Meth Panel, outside experts elected to assess methodology proposals and make recommendations to the EB). Since, in addition, one of the authors has been a member of the Registration and Issuance Team (RIT) (a further group of outside experts elected by the EB to make recommendations on projects) we cover all relevant institutional perspectives. By the choice of respondents, we attempt to include individuals with long-term experience within the UNFCCC, some of them successively in different institutional positions.⁶ All interviews were carried out in October 2012. This information is complemented by an intensive analysis of UNFCCC meeting documents, rules and regulations.

To directly test the above hypotheses, we further use descriptive statistics and econometric analysis based on quantitative data, which we collect from numerous UNFCCC documents and from the information provided by UNEP-Riso Centre on individual CDM projects and methodologies (see details below).

Based on the available qualitative evidence, we first obtain a concrete picture of what has effectively changed in day-to-day practices and official regulation, and we examine whether active participants in both administrative and political decision making processes perceive an increased influence of the CDM staff. Second, we use the available quantitative information on resources and workload to analyze the effect of increased staff on attempts to gain further influence. More specifically, we assess the hypothesis that the growth of the CDM staff may have led to an ever

⁶ Most of the interviewees requested anonymity so that we cannot reveal their names or concrete role within the UNFCCC process.

increasing number of agenda items at EB sessions. Finally, we directly look at EB decisions and examine whether their determinants have changed over time in a way that would be consistent with a stronger influence of the Secretariat.

4.1. Changes in rules and regulations concerning the Secretariat's freedom of action

When carrying out our interviews, we first confronted all interviewees with the results from the earlier literature discussed above. There was wide consensus that the Secretariat was indeed strictly apolitical, concentrating on technical support. It was confirmed that the Secretariat's influence was indirect by providing information, general advice and concrete practical suggestions to the political decision making bodies. One respondent even considered that the Secretariat was too apolitical, and would have preferred to have it involved more directly into strategic policy advice rather than focusing so much on technical and implementation related issues. A respondent from within the Secretariat revealed that the complete restraint from any political interference had been an explicit strategy of the Secretariat in early years in order to gain trust from the different parties. In general, respondents agreed that this apolitical stance and the restraint from direct political interference have remained unchanged until today for most areas of activities.

When explicitly pointed to developments within the area of the CDM, however, a different picture emerged. Several interviewees indicated that CDM rules have evolved rapidly ever since the Marrakech Accords defined the first set of modalities and procedures for the CDM in 2001, and that these developments provided more scope for a direct influence of the Secretariat in this area. Initially the CDM EB and its panels and working groups were exclusively responsible for drafting of decisions on proposed methodologies and projects submitted for registration. According to the respondents from delegations and political decision making bodies, due to the massively growing inflow of projects for registration and methodology proposals the workload of the EB

increased so much over time that soon, EB and Meth Panel members were completely overburdened and happy to outsource work to the Secretariat. This process started in 2007 when Secretariat resources, too, permitted a constant follow up of technical issues by the first full-time specialized and hence highly competent staff. In fact, most interviewees concur in the assessment that the Secretariat's staff was well informed and an indispensable and highly valuable resource to move things forward at a time where elected decision making bodies were clearly overburdened. At the same time, this brought the Secretariat into a position in which it could more actively suggest rules and procedures, an activity that has considerably accelerated since 2009.

While initial developments did not imply any formal change in the Secretariat's responsibilities, in 2010 and 2011, CDM staff proposed a simplification of decision making processes along with new and "streamlined" rules of procedure that effectively strengthened its own influence as compared to the Meth Panel and other external experts supporting the EB. Different interviewees, including an EB member, stressed that, due to the complexity of these new rules of procedure, the more explicit role of the Secretariat "creeped" in, without the EB being fully aware of all consequences of its own decision. While certainly less politically contested and salient than decisions about climate change mitigation commitments, the influence gained by the Secretariat clearly extended to areas that cross the border from the purely technical to the political.

The stronger role of the Secretariat can be best exemplified in the specific case of requests for review for problematic project proposals. When a CDM project is submitted for registration, three members of the CDM EB can request a review of the documentation if they are of the opinion that the project does not fulfill the requirements of the CDM. Initially, the Secretariat just checked whether the documentation submitted by the project developer to achieve registration was complete

with respect to the number of documents (see decision EB 14, Annex 7 (June 2004), para 3e)⁷ while the EB members had to assess the content and to then decide whether or not to launch a request for review. From February 2007 onwards, Secretariat staff provided a summary note to assess each case, taking into account the assessment by the independent experts from the RIT (see decision EB 29, Annex 14, para 25). This essentially led to a reduction of the salience of the RIT assessment as since then, EB members have routinely used the text of the summary note for the submission of review requests. In May 2010, new rules introduced by the EB to simplify the procedures and speed up the decision making process allocated even more responsibility to the Secretariat. The completeness check by the Secretariat was made much more elaborate including an evaluation of the content of the documents (EB 54, Annex 28, paras 13-15). RIT members are no more involved in this assessment.

According to information from the EB, the Secretariat even suggested to fully abolish the RIT, but the EB decided to keep this board of independent experts in place. However, in practice, the responsibility of the RIT is now largely restricted to assessments of those cases that the Secretariat classified as problematic in its summary notes. The RIT currently only assesses those cases for which a request for review is effectively launched by the EB. Since this decision is based on the prior assessment of the Secretariat, projects supported by the Secretariat will hardly be challenged. From August 2010 onwards, once a review is launched, the Secretariat provides a full assessment in parallel to an assessment by two RIT experts (see decision EB 55, Annex 40, para 12). If both assessments agree, the EB decides accordingly unless one EB member objects (para 20). Rulings, i.e. the explanation of a rejection decision, are to be drafted by the Secretariat (para 26). This is a clear increase of the responsibility of the Secretariat which was triggered by

⁷ This EB decision as well as all those cited in the following are included in the respective annexes of UNFCCC (various years b).

suggestions from the Secretariat to the EB. The change in procedures over time is illustrated in Figure 3.

Figure 3 about here

In sum, both interviews and official documents indicate that, while stable in other areas, the influence of the Secretariat has clearly increased in the area of the CDM. It is now drafting more texts that were previously written by members of elected bodies or independent experts selected by these. As highlighted by one respondent, drafting of these texts is extremely important because small changes in the formulation are often crucial for later interpretation. The Secretariat has also taken over other additional tasks, and presents its assessments (including its perception of other bodies' agreement or disagreement) directly to the EB. Several respondents also mentioned that the Secretariat has started to develop its own standpoints (e.g. on simplification needs and on stronger support for Sub-Saharan Africa) and to defend them directly within (and partially against) elected bodies of the UNFCCC. Finally, recent EB decisions tend to confirm and formalize this stronger role of the Secretariat, even if requests of the latter are not always accepted immediately and not always accepted in full.

Throughout our interviews, the general assessment of these developments appears to be widely shared. However, opinions differ on whether this is good or bad. From the perspective of the EB, if the Secretariat takes over more responsibilities, this can free the EB for more strategic discussions and considerably speed up decision making processes. As the final decision always remains with the EB, it is sufficient to make sure that its members (especially the chair) are sufficiently well informed and vigilant. However, it seems, that time constraints often limit these abilities. Others see an increase in activism that has been detrimental to the quality of the Secretariat's work.

One respondent directly pointed to a possible link to the increased resources, and expressed the belief that the strong increase in manpower may have led to the Secretariat's search for new tasks and responsibilities.

4.2. CDM staff and the burden of political decision making committees

Our interviews strongly suggest that the volume of decisions to be taken in EB meetings has significantly increased over time, and that this increase in the general workload requires a stronger involvement of the Secretariat. While initially, EB members had often more experience than the Secretariat, and tended to decide on the basis of their own evaluation of the relevant background information, this situation has gradually changed over time, given the development of the large and well-informed CDM unit within the Secretariat. The reason for the increase in the EB workload given in the interviews is the overall success of this market mechanism, i.e. the CDM's ability to attract a dramatically rising number of project submissions and underlying methodologies.

The black lines with triangular markers in Figure 4 below only partially support this conjecture. While the number of projects continuously rose over time, the number of methodologies submitted was at its highest between 2004 and 2009 and declined thereafter. In addition, over time, project decisions have become a routine, and, with a few exceptions, do not require much input by the EB.

In fact, as mentioned above, since May 2010, many projects have not even passed through the EB anymore. We should thus expect EB workload to be better reflected by the number of methods, which require a more conceptual evaluation. In fact, this can indeed be seen when looking at the content of EB meeting reports. The upper green line with filled circles in Figure 4 presents EB workload as measured on the basis of the annual sum of annexes (i.e. substantial agenda items

decided upon) to these reports. The line first increases, but then falls back, and appears to be correlated to the number of methodologies, rather than projects submitted to the EB.

Figure 4 about here

If we differentiate between different types of agenda items and specifically consider those that have been suggested by the Secretariat (measured in terms of the annexes proposed by the Secretariat before the EB meetings), we do observe a steady increase (green line with unfilled circles). The Secretariat has thus continuously increased the number of issues it requested the EB to handle at its meetings. If the parallel increase in projects cannot explain this phenomenon for the reasons explained above (or, at least, cannot explain it well in the most recent years), what else can explain this development?

Looking at the red line with (unfilled) squares that again represents CDM staff growth, it becomes obvious that the hypothesis about an impact of staff growth on EB workload has some plausibility. To be sure, we carry out a regression analysis using different indicators of EB workload as a joint dependent variable (number of annexes in the agenda suggested by the Secretariat, number of annexes in the final report, page numbers of the final report, paragraphs in the final report). We regress this variable on CDM staff controlling for project numbers and the number of methodologies, and taking account of potential interaction effects between all these variables and an indicator variable (DU) distinguishing between Secretariat-introduced workload (annexes in the agenda suggested by the Secretariat) and other workload introduced, e.g., through the Compliance Committee (a committee with elected members in charge of the monitoring of UNFCCC member states' compliance with their commitments in the framework of the Kyoto Protocol.) We further cluster standard errors based on the different categories of the dependent variable, and consider additional fixed effects. To be sure not to draw on variables that are too

different to be combined, we also present individual regressions for the different categories although the number of observation then shrinks to 13. Results are presented in Table 1.

Table 1 about here

Given that the resources for the CDM part of the Secretariat are determined by the market demand for CDM projects through the project-related fee rather than by year-to-year political decisions within the organization, the model should be reasonably free of endogeneity problems once the number of projects and corresponding methods are controlled for.

It turns out that controlling for the workload related to methods and projects submitted, the effect of an increase in staff numbers has a robust and significant effect on EB workload. On average, an additional staff member increases the number of annexes in the EB agenda suggested by the Secretariat by about 0.3. This relationship is also shown graphically in Figure 5 (partial scatter plot based on regression 3).

Figure 5 about here

The regression analysis also shows that the agenda items suggested by the Secretariat (dependent variable in regression 3) are most clearly linked to CDM staff. This should be expected since, by definition, this is the dependent variable on which the Secretariat has the most direct influence. Equally in line with our arguments, the analysis shows that the overall workload depends less significantly on project submissions than on methodologies (see, in particular, regressions 4-6).

In any case, the empirical evidence is clearly consistent with the hypothesis of an attempt of the Secretariat to increase its own influence and responsibilities. It should again be noted that this support of the hypothesis on bureaucratic expansion and campaign for more influence is not necessarily negative. As most interviewees have underscored that the CDM staff is highly

competent and experienced, the additional items suggested on the EB agenda may relate to important issues that might have gone unnoticed in a situation with more limited human resources at the Secretariat. It should also be noted that the evidence presented in this section does not suggest bureaucratic pathologies as found for some other organizations where staff is rising at a stagnant or even declining rate of exogenous (non-self-generated) tasks (“Parkinson’s law”, see Parkinson 1957). In the context of the UNFCCC, the initial increase in methodologies and the continuous rise of projects is clearly related to an increase in the workload not just for the EB, but also for the Secretariat itself. In fact, the projects that do not pass through the EB anymore since May 2010 need to be assessed by the Secretariat. This implies increased competencies, but also an increased workload, as the principal (EB) delegated the task to the agent (Secretariat).

5. Staff increase and changing determinants of EB decision making

We will now look directly at decisions within the EB and examine whether their determinants have changed over time in a way that is consistent with a stronger influence of the Secretariat. In this context, we can build on earlier econometric work on determinants of EB decision making (Flues et al. 2010). We expect that if the Secretariat has indeed gained a stronger influence in recent years, this should reduce the influence of other actors, notably of EB member countries and the lobbies that tend to shape national preferences, but also of international organizations. Flues et al. (2010) further observed that the EB was relatively lenient in the early years and became stricter thereafter. Given the direct incentive of the CDM staff to generate a higher number of accepted methodologies (and thereby projects) in order to rise the volume of the fees, an increasing influence of the Secretariat on EB decision making should tend to reverse this trend.

Table 2 first replicates the preferred regression in Flues et al. (2010) and then adds all new information on EB decisions for methodologies that have been available until mid-October 2012 in the UNEP Riso database (UNEP Riso Centre 2012). It turns out that indeed, for the full period, we cannot confirm anymore that the EB has become stricter over time because the variable “year of decisive EB decision” is no more significant. However, as opposed to the hypothesis that a stronger Secretariat should reduce the influence of vested interest from individual parties, host country membership becomes even more strongly significant. At the mean of all other variables, being represented in the EB increases the probability to obtain a positive EB assessment by 25%. Methodologies proposed by international organizations, however, lose their significance.

In regression 3, we examine what drives these changes by looking only at the new data. It turns out that the year of decision even has a relatively strong positive effect in the second period. Thus EB decisions have become more lenient over the last few years (since 2007) as opposed to what we observed for the initial phase. Equally in contrast to the first period, methodologies proposed by international organizations had a significantly lower chance to succeed. Notably, methodologies developed by the World Bank were all approved in the first phase, and rejected in the second phase. This may be due to the perception of EB members that the World Bank should not dominate the CDM market and crowd out other players. However, host country EB membership shows an even stronger effect on the approval of methodologies than before. This last point clearly does not confirm our expectations according to which a stronger role of the Secretariat in the second phase should lead to reduced influence of other actors.

Table 2 about here

To examine to what extent the differences between the two phases are actually linked to the role of the Secretariat, we include CDM staff directly as an additional explanatory variable into regression 4 for the full sample. The variable is significant at the 10% level and suggests that adding

ten staff members to the Secretariat raises the probability of the approval of a methodology by 8%. As compared to regression 2 (equally for the full sample) the inclusion of the staff variable induces the time trend (year of EB decision) to again turn negative and significant. This shows that indeed the change in the marginal effect of the trend variable observed earlier is due to the strengthening of CDM staff numbers over time. However, other effects do not seem to be affected.

The most intriguing part thus remains the fact that host country EB membership continues to have such a strong effect. To examine in more detail how it is related to the strength of the Secretariat, we introduce an interaction term between CDM staff and host country EB membership into regression 4. Results regarding the effect of EB membership at the median of all other variables are presented in the first panel of Figure 6. They indicate that host country EB membership becomes significant for about 20 CDM staff members and more, i.e. ever since the CDM unit within the Secretariat became fully functional. The effect then seems to first rise (up to about 60 staff members) and then fall again, but the 95% confidence intervals (dotted lines) show that variance is large and these differences are not significant.

In the second panel of Figure 6 we replicate the illustration for a situation, in which the initial Meth Panel decision is not at the median (=1, see notes under Table 2), but 0 indicating that the Meth Panel did not consider the method as acceptable. In such clearly negative cases, EB membership of host countries usually does not have much influence because the EB tends to follow the Meth Panel in its assessment. However, at high levels of CDM staff (above about 60), the variable again turns significant. This suggests that with the support of a strong Secretariat host countries may be able to push through their methodologies even if they are highly contested (at least at the stage of submission, i.e. before further revisions). Both the Secretariat and the host country will benefit from that – the former because the CDM market is growing, and the latter because it will be able to develop more projects.

The final panel of Figure 6 shows the opposite situation where the initial Meth Panel assessment is positive. In this case, there is no significant effect of host country EB membership, no matter the Secretariat's staff size. This is easy to explain as in such cases, there is no need for the host country to put pressure on the EB to approve the methodology.

Figure 6 about here

All in all, the graphical analysis confirms the result that the increase in CDM staff size has not led to a reduction of EB member influence. To the contrary, there may be collusion between the Secretariat and certain EB members who are interested in rules that favor CDM projects in their countries. Such collusion only relates to support of country-specific interest by the Secretariat, not to informal discussion that brings about consensus. This is not in line with our expectations. However, it provides some support for Stone's (2011) argument that a strong bureaucracy allows important member states to exert informal influence through interaction with the staff.

The analysis shows that EB decisions are clearly influenced by the developments within the Secretariat. While the effect is not always in line with our expectations, today's existence of a large and experienced CDM staff has changed the determinants of EB decision making. Methodology approval rates have gone up, and the Secretariat did override critical Meth Panel recommendations.

6. Conclusions and outlook

Based on a theoretical principal-agent framework of the dynamic interaction between the staff and the member countries of an international organization, we show that externally driven resource growth can lead to more autonomy even for bureaucracies that were initially highly constrained and fully apolitical as in the case of the UNFCCC. This runs counter the established literature that suggests that environmental treaty secretariats are "apolitical". At least in the

somewhat less politically contested fields within the organization, resource growth can induce a secretariat to circumvent initial delegation and obtain greater responsibilities.

In the first decade of its existence, the UNFCCC Secretariat has played a neutral facilitation role for international climate negotiations. Expert interviews, official documents and available quantitative data clearly demonstrate that dramatic changes in financial and human resources have in turn led to changes in the role and influence of the Secretariat, while the organizational and political conditions did not change. While the Secretariat as a whole continues as before in its second decade, a much more hands-on role has emerged in the CDM part of the Secretariat related to the unexpected bonanza of revenues from CDM project fees that amounted to hundreds of million USD. Due to initial institutional regulations the tremendous increase in resources for this part of the Secretariat could not be channeled to other areas of activity. This led to specific developments in this particular field: First, as clearly expressed in the interviews, the CDM Executive Board (EB) as the relevant political decision making body made increasing use of the Secretariat's staff for activities initially carried out by its own members or subsidiary bodies of experts. Second, the growing staff – reaching close to 200 - proposed an ever increasing number of issues to deal with at EB meetings thereby reinforcing the tendency of the EB to delegate even further. This allowed the Secretariat to influence the rules in order to increase the number of CDM projects and issuance of credits. Since resource increase is driven by private demand for CDM projects, it can be considered as exogenous, and the causality of this relationship can be identified. Interviews reinforce this interpretation since respondents (even from within the EB) conceded that in recent times, it happened to the EB to only realize ex post that its decisions based on proposals by the Secretariat had effectively expanded the autonomy of the latter. Third, the Secretariat's stronger role has effectively led to a statistically significant influence of the staff on EB decisions,

and collusion between CDM host countries represented in the EB and the Secretariat may exist, as suggested by the econometric results.

The influence of the Secretariat thereby crossed the border from the purely technical to the political sphere, as the Secretariat started to actively influence the rule-setting for the CDM. Nevertheless, this change remained contained within the context of the CDM and did not affect the attitude of the Secretariat in other areas. One might conjecture that the same resource growth – if it had happened in the much more strongly contested and politically salient core areas of UNFCCC activities – would have had a different effect. The very fact that no decision was taken about a redistribution of resources within the Secretariat once the dramatic accumulation of resources in the CDM part became apparent, may point in this direction. While politically difficult given the position of developing countries, such a decision might still have been conceivable if one had really observed a need for other parts of the Secretariat to be strengthened. As also alluded to in our interviews, this was not the case precisely because these areas were deemed too politically sensitive for the Secretariat to play a major role. This observation is in line with the theoretical arguments that have been used in the literature to explain why the UNFCCC Secretariat was so much more apolitical than the secretariats of other environmental agreements in the first place. Our results are consistent with this literature in that it is only one of the least political and most technical parts of activities within the UNFCCC where the Secretariat's influence grew.

We refrain from providing a normative assessment of the developments we observe. While the increased autonomy of the Secretariat was in many cases explicitly desired (and voted for) by the principals (i.e., member countries represented in the EB), some of the increase also went unnoticed by governments as it focused on highly technical areas. Although they generally agreed on the quality and dedication of the Secretariat, interviewees from different areas within the UNFCCC structure showed diverging views on the desirability of the Secretariat's rise in

autonomy. The preferences of member countries' citizens, the ultimate principals, have not been considered in our analysis, but should differ widely depending on their support for climate policy in general, for the CDM in particular, and on their perception of the dedication of the Secretariat to the relevant policy objectives.

It will be interesting to observe how the situation will develop in the coming years. Due to the lack of ambition in the international agreements on emission reductions after 2012, the number of new CDM methods and projects has fallen dramatically. Given the enormous financial surplus accumulated already, at some point, a mismatch between resource use and the actual relevance of this area within the UNFCCC will become undisputable. Will there be a way to efficiently use these resources? Will a redistribution then take place at least within the Secretariat? If there is no change in regulations opening the way to a reallocation of resources, the CDM part of the Secretariat will soon become a great new example of “Parkinson’s law”, i.e. an example of declining workload hand in hand with increasing bureaucracy.

Acknowledgements

We thank Liliana Andonova, Carsten Hefeker, and Tana Johnson, as well as the referees for their very thoughtful comments that have helped us to substantially improve this paper. Moreover, we thank all those who shared their precious time with us during our interviews, and without whom this paper would have been much less rich in concrete examples.

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Tables for text

Table 1: CDM staff and EB workload

	(1)	(2)	(3)	(4)	(5)	(6)
	Joint Indicator	Joint indicator	Annexes to EB agenda (as proposed by Secretariat)	Annexes to EB meeting reports	Paragraphs of EB meeting reports	Pages of EB meeting reports
CDM staff	0.332*** (0.000)	0.298** (0.030)	0.299** (0.018)	1.297 (0.156)	1.600 (0.171)	0.596* (0.064)
CDM staff x DU	0.833* (0.072)	0.867* (0.094)				
Methods submitted	-0.051*** (0.000)	-0.138 (0.533)	-0.135 (0.227)	2.353** (0.021)	5.698*** (0.001)	1.098*** (0.004)
Methods submitted x DU	3.101 (0.115)	3.189 (0.141)				
Projects submitted	0.034*** (0.000)	0.035*** (0.003)	0.035* (0.051)	0.001 (0.993)	0.193 (0.266)	0.014 (0.753)
Projects submitted x DU	0.036 (0.612)	0.034 (0.593)				
Constant		6.680 (0.689)	6.476 (0.263)	-23.351 (0.608)	44.929 (0.446)	-1.333 (0.930)
FE yes						
Observations	52	52	13	13	13	13
Adj. R ²	0.899	0.453	0.950	0.747	0.903	0.869

Notes: Robust p-values in parentheses (*** p<0.01, ** p<0.05, * p<0.1).

DU is an indicator variable taking the value of zero if the observation for the joint dependent variable (models 1 and 2) refers to annexes suggested by the Secretariat, and one otherwise.

Table 2: Determinants of EB decisions (probit regressions, clustered by host country)¹

	(1) Replication of Flues et al. (2010)	(2) Adding the new data	(3) New data only	(4) All data, adding CDM staff
Initial Meth Panel decision, adjusted ²	1.212*** (0.000)	1.001*** (0.000)	1.385*** (0.000)	1.077*** (0.000)
Host country is EB member or alternate ³	0.254** (0.027)	0.249*** (0.003)	0.423*** (0.002)	0.274*** (0.003)
Consultant's country is EB member or alternate	-0.162 (0.249)	-0.162 (0.110)	-0.065 (0.684)	-0.173 (0.122)
Consultant is an international organization	0.296** (0.043)	-0.121 (0.401)	-0.542*** (0.000)	-0.14 (0.915)
Year of decisive EB decision	-0.118*** (0.006)	-0.001 (0.967)	0.175** (0.014)	-0.182* (0.061)
CDM staff				0.008* (0.056)
Observations	207	355	148	355
Number of clusters	40	51	36	51
Pseudo R ²	0.701	0.718	0.842	0.724
Wald chi ²	55.42	318.2	58.97	374
p-value	0	0	0	0
Area under the ROC curve	0.971	0.973	0.989	0.974

¹ The table shows marginal effects at the mean of all variables. Robust p-values in parentheses (***) p<0.01, ** p<0.05, * p<0.1).

² Values are: 2 for A (sound method), 1 for B (requires revisions), and 0 for C (should not be approved). Initially, there was an explicit distinction between initial and final Meth Panel decisions, which were taken after revisions by the developers of the methodology. Since June 2007, however, the Secretariat carries out potential revisions and formally, the Meth Panel decides only once and for all. However, a number of methods that eventually receive a positive assessment are returned one or two times from the EB to the Meth Panel. We use these revision cycles as an indicator of an initial divergence between the Meth Panel and the EB decision and code the “initial Meth Panel decision” as 2-number of revision cycles.

³ Alternates have formal voting rights only if the full member is not present. However, they assist the meeting and participate in the discussions. De facto, this gives them a similar influence on EB decisions.

Figure 1: The international bureaucracy in a dynamic principal-agent perspective

Figure 2: Development of financial and human resources

Note: Expenditure includes the core budget and all trust funds except the trust fund for participation in the UNFCCC process, which includes only transitory positions. When figures were reported other than for a full calendar year, they were annualized assuming an even spread of expenditures over the year.

Source: Annex 1, Table A2.

Figure 3: Changes in procedures to launch a request for review for project registration

Note: The final decision on the review is always taken by the Executive Board.

Figure 4: CDM staff, tasks and EB workload

Note: For 2012 predictions based on data until 1st August for projects (x 12/7), and 1st October for methods and agenda related variables. (x 4/3).

Source: Annex 1, Table A2, UNFCCC (various years a) UNFCCC (various years b).

Figure 5: The influence of CDM staff on EB agenda items

Note: The graph corresponds to Table 1, regression 3. X are controls for the number of CDM methodologies and CDM projects submitted.

Figure 6: Effect of host country membership on EB decisions

Annex 1

Table A1: Distribution of UNFCCC resources across different funds and activities, 2012

Name of fund (year of creation)	Expenditures ¹ (USD million)	Human resources ¹	Central activities of the different funds
Trust fund for the core budget of the UNFCCC (since 1994)	20.1	156.5	General management and conference organization; assessment of emissions; data analysis and information services
Trust Fund for Participation in the UNFCCC Process	3.3	0	Financial support of developing country delegations (travel cost)
Trust Fund for Supplementary Activities (since 1996)	13.8	51	Initially for new activities, currently core activities (→core budget) but financed through voluntary contributions
Trust Fund for the Clean Development Mechanism (CDM) (since 2008) ²	44.7	195	Support for the regulatory supervision of emission reduction projects in developing countries and underlying methodologies
Trust Fund for the International Transaction Log (since 2008)	4.0	7	Executing transactions of emission certificates between countries
Trust Fund for the Special Annual Contribution from the Government of Germany (Bonn Fund) (since 1998)	4.3	8 (+2)	Conference support (+ operating office premises)
Program support costs (overhead of 13% on all trust funds)	10.0 ³	75	Administrative services

¹ Information by UNFCCC for both staff and expenditures refers to the date of 30 June 2012. Financial information was multiplied by two to approximate expenditures over a full year.

² Note that staff numbers for the CDM as shown in Figure 1 of the text are not necessarily identical with those of the CDM trust fund because CDM staff numbers are usually reported for 1st January (rather than for 30 June), and because the activities of the different trust funds overlap to some extent. In initial years (especially before 2008), CDM staff was also financed from other sources.

³ Not to be included in total expenditure as it is already contained in the expenditure of the individual funds.

Source: UNFCCC (2012a).

Table A2: UNFCCC institutional development – resources, leadership and key events

Phase	Year	Executive Secretary	Total budget. million USD)	CDM trust fund. million USD)	Total staff	CDM staff	CDM methodologies ²	CDM projects ³	Key events
0	1992	Zammit Cutajar	NA		NA				
0	1993	Zammit Cutajar	NA		NA				
1	1994	Zammit Cutajar	NA		NA				UNFCCC entry into force
1	1995	Zammit Cutajar	NA		34				Berlin mandate
1	1996	Zammit Cutajar	4.5		NA				
1	1997	Zammit Cutajar	4.5		47				Kyoto Protocol
2	1998	Zammit Cutajar	10.6		63	1.5			
2	1999	Zammit Cutajar	10.6		86	5			
2	2000	Zammit Cutajar	15.6		124	5			
2	2001	Zammit Cutajar	15.6		144	5			Marrakech Accords. (November)
3	2002	Waller-Hunter	20.8		165.5	6			
3	2003	Waller-Hunter	20.8		168.5	6	36		
3	2004	Waller-Hunter	26.7		165.5	17	50	2	
3	2005	Waller-Hunter	26.7		194.5	25	76	141	Kyoto Protocol entry into force. (February)
4	2006	de Boer	38.6		221.5	40	75	443	
4	2007	de Boer	38.6		265.5	75	52	567	Secretariat summary note for registration requests and recommendations for methodology revisions
4	2008	de Boer	63.8	18.3	325.5	97	66	717	
4	2009	de Boer	63.8	18.3	364.5	143	61	727	Copenhagen conference fails

Table A2 (cont.)

Phase	Year	Executive Secretary	Total budget. million USD)	CDM trust fund. million USD)	Total staff	CDM staff	CDM methodologies ²	CDM projects ³	Key events
5	2010	Figueres	84.1	31.7	452.5	177	23	756	Review procedure changed
5	2011	Figueres	84.1	31.7	467.5	177	33	961	Rules for standardized baselines introduced
5	2012	Figueres	86.9	44.7	494.5	177	20	1517	Top down methodologies introduced

¹ Expenditures

² Annual numbers according to open comments date for large scale methodologies and submission date for forestry and small scale methodologies. For 2012, we use predictions based on data until 1st October x 4/3).

³ Submission for registration. For 2012, we use predictions based on data until 1st August x 12/7).

⁴ Submission for determination. track 2)

Sources: UNFCCC 1996, 1997b, 1999a,b,c, 2000, 2001, 2002b, 2003a,b, 2004, 2005c, 2006, 2007, 2008, 2009, 2010, 2011, 2012a,b), UNEP Riso Centre 2012)