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## **Determinants of bargaining success in the climate change negotiations**

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### **Abstract**

A novel dataset, combining interview data with negotiation delegates and hand-coded data of delegate statements, was used to empirically test six hypotheses about the determinants of bargaining success in the UNFCCC negotiations. The success of a state's bargaining strategy was evaluated by first measuring the distance from a state's original position on 8 policy issues (e.g. emissions reduction targets) to the current state of the negotiations. The results were then readjusted using salience weights to control for how important each negotiation issue has been for each delegation. It was found that the external power of a state and how vulnerable a state is to climate change positively influence its bargaining success, while the extremity of a state's position and its share of emissions appears to negatively influence it. In addition, the use of soft bargaining strategies by a state, which mutually benefits all concerned actors, was found to positively influence success when a negotiation issue was particularly salient to it. Thus, it appears that the influence of powerful nations, such as the US and China, in the climate change negotiations may not be as strong as previously thought.

**Keywords:** bargaining success; climate change; climate change negotiations preference attainment; UNFCCC;;

## **1. Introduction**

What are the factors that determine bargaining success, i.e. the level of influence a party exerts over negotiated outcomes, in international negotiations? Although there is a substantial theoretical literature on bargaining situations and negotiations, there are few studies by social scientists that include a larger number of cases. One exception is the Council of the EU, as negotiations in this institution have been covered more extensively (see e.g. Mattila and Lane, 2001; Mattila, 2005; Hayes-Renshaw et al., 2005). Furthermore, some of the findings regarding the EU are inconsistent. Some researchers conclude that the negotiations are balanced over a larger number of issues, and produces neither winners nor losers (Bailer, 2004; Arregui and Thomson, 2009). Others disagree and claim that some countries perform better than others (Selck and Kaeding, 2004; Selck and Kuipers, 2005). There is even less agreement about the factors that actually determine bargaining success, and there has hardly been any work on international bargaining situations that involve most (if not all) of the countries of the world.

A novel dataset on the climate change negotiations, gathered over the past two years, is used to fill this research gap. Using the Cancun Agreements as a reference point, the positions of a substantial number of the relevant actors were collected and compared with the actual outcomes of the negotiations as they currently stand.

An introduction to the theoretical background of bargaining situations generally, and in particular the climate change negotiations is provided in Section 2. In Section 3, six hypotheses on the effect of power, salience, bargaining strategies, etc. on negotiation success, are derived. In Section 4, the hypotheses are operationalized, the independent and dependent variables are described, and the results of the statistical analysis are presented. In Section 5, the results of the analysis are given. In Section 6, it is concluded that external power (measured by total GDP), vulnerability to climate

change impacts, extremity of negotiation position and share of GHG emissions, are the most important determinants of success in the climate change negotiations.

## **2. Theoretical Background**

### **2.1. Climate change negotiations**

When asked to evaluate the success of various countries in the climate change negotiations, particularly with respect to the Cancun Agreements, the Canadian delegate stated that:

In Canada's view, the Cancun Agreement represents significant progress in the negotiations and was successful in that it reflected a perfectly fine balance of the views of all Parties. In that context, I would say, that all Parties should be somewhere in the mid-point of your scale [measuring success] in terms of having had to make some sacrifices on the one hand but seeing their views reflected throughout the Agreement on the other. This shows the value of international relations, where countries can give and take on national positions to come up with compromises that can work for all.<sup>1</sup>

The quote suggests two ways of thinking about success in international negotiations. Success might be assessed at the aggregate level where a bargaining process can be considered successful if it ends in an agreement, preferably framed by a legal text. However, success in negotiations might also be thought of in terms of the influence a party exerts on the outcome of the negotiations, i.e. bargaining success. It is this second notion of success that is here analyzed.

From the perspective of a single country delegation, 'success' can be regarded as the value contained by a treaty for the state it represents. This can be measured by the distance between the country's original position and the negotiated outcome. As Milner (1992, p. 468) notes, underlying this characterization of success as 'proximity

to a negotiated outcome' is an assumption that 'cooperation provides actors with gains or rewards', and that these benefits are usually not shared equally among negotiating parties. Thus, bargaining success is a measure of how closely a negotiated agreement tracks a country's preferences (assuming that countries rank potential outcomes according to related payoffs from high to low). Some researchers thus favour the term 'preference attainment' over that of 'success' (see e.g. Traber, 2010). (The two terms are used interchangeably here.)

## 2.2 Climate change negotiations

As the negotiations on the climate - a global public good - constitute a Prisoner's Dilemma, they are plagued by a severe free-rider problem: while emissions commonly accrue domestically, the damage caused by unabated emissions is shared with the rest of the world (Carraro and Siniscalco, 1993, pp. 309-311; Morrow, 1999, pp. 16-25). Thus a country can fail to reduce its own domestic emissions while at the same time benefit from emissions reductions achieved elsewhere in the world. From the perspective of a single country, the payoff for free-riding and playing the uncooperative strategy (e.g. not reducing emissions) can look greater than that of cooperating with other countries. However, if the result is that all (or most) of the involved parties do not cooperate, as the Prisoner's Dilemma suggests, the worst outcome with the lowest payoffs collectively (e.g. no reduction in emissions) is reached (Hopmann, 1996, pp. 73-75).

The consequences of this dilemma are reflected in the progress of the climate negotiations over the past years. As a result, some researchers portray the possibility of finding a solution to tackle the global climate crisis in rather pessimistic terms (see Helm, 2008; Brennan, 2009; Dimitrov, 2010a). It is however assumed here that coordination between players is possible and that they can either redefine the rules of

the game to overcome the Prisoner's Dilemma through reciprocal expectations, or suffer the consequences of failure together (Schelling, 1960, p. 107). However, given these assumptions, an actor's negotiation position may not necessarily be the result of his actual preferences, but rather may reflect strategic choices made to influence the outcomes of the negotiations (Frieden, 1999, pp. 41-45; see also Putnam, 1988; Moravcsik, 1997; Morrow, 1999). Unfortunately, because actors' underlying preferences cannot be measured (Lake and Powell, 1999, pp. 18-19), the analysis uses the concept of success to investigate their strategic choices.

How successful have single parties been with respect to the Cancun Agreements and what are the determinants of negotiation success? Providing answers to these questions is potentially problematic for five reasons. First, the Cancun Agreements are not the final outcome of the ongoing United Nations Framework Convention on Climate Change (UNFCCC) negotiations. A reevaluation of the same data on country positions, when compared to a future treaty, might thus result in rather different conclusions than those reached here. Second, the cross-sectional (rather than longitudinal) design of this study prevents following the development of country positions and their impact on the various treaties produced by the UNFCCC over time. Indeed some of the factors that appear to explain success might turn out to be insignificant due to peculiarities of the negotiation process at the specific period used here. Third, the data collection effort, described in more detail below, was conducted over an eleven month period between the UNFCCC meetings in Bangkok (September 2009) and Bonn (August 2010), a period that included the Fifteenth Conference of the Parties (COP 15) held in Copenhagen. However, due to the fact that neither the dynamic nor the scope of the negotiations in Copenhagen changed, it seems reasonable to maintain that the Copenhagen Accord was not particularly influential on party positions and that therefore positions obtained before and after

Copenhagen can be assumed to capture the same negotiation period. Nevertheless, this assumption of preference stability before and after Copenhagen is crucial for the results presented here and should be kept in mind. Fourth, the climate change negotiations are embedded in a wider framework of diplomatic negotiations and international relations. Thus, apparent losers in the UNFCCC negotiation process might be compensated in a different diplomatic arena.<sup>2</sup> Such potential side payments and compensations are not accounted for here. Finally, the proximity of a party's position to the final negotiated outcome might to some extent be explained by luck (Barry, 1980a, 1980b). However, as success is measured across several negotiation issues, the likelihood of consistently achieving high success values through sheer luck in some or all of these is rather low.

### **3. Hypotheses**

A long-standing debate amongst scholars of international relations is how gains and rewards are divided amongst negotiating parties (for a summary see Katzenstein et al., 1998).

#### **3.1. Power**

*Prima facie*, how powerful a nation is would seem to have a major role to play in negotiation success. Realism assumes that states particularly care about relative gains, i.e. how well off they are by agreeing to a treaty compared to other countries; neoliberal institutionalism maintain that states' actions are best explained through absolute gains (Powell, 1991, pp. 1303-1306; Milner, 1992, pp. 470-473), i.e. maximizing their own utility independent of the payoffs of other countries.

Realism presumes that states are essentially looking for a balanced distribution of gains in international negotiations. They

define balance and equity as a distribution of gains that roughly maintains pre-cooperation balances of capabilities... No nation will concede political advantages to another nation without the expectation... of receiving proportionate advantages in return. (Grieco, 1990, p. 47)

Realism thus implies that more powerful nations should be expected to prevail in international negotiations.

From the perspective of neoliberal institutionalism, the question arises whether power can still be used to determine negotiation success. Seeking absolute gains might help negotiating parties to reach the Pareto frontier, i.e. the set of possible negotiation outcomes that maximize the gains for all countries combined (Krasner, 1991). Coming to an agreement however on a specific point along this frontier still requires bargaining and the use of power. Absolute gains combined with the kind of reciprocity assumed by many liberal thinkers might, after all, have the same result as relative gains: power might matter after all (Milner, 1992).

Power - as a measure of influencing negotiation outcomes - has both an internal and external dimension. External power resources, such as a country's economic strength (Drahos, 2003), are 'determined by an actor's environment and therefore difficult to change during the course of negotiations' (Bailer, 2004, p. 100).

*H1*: Countries with more external power resources are better able to realize their goals in the climate change negotiations.



Internal power resources, such as delegation size and the negotiation skills of diplomatic staff, are more subtle than their external cousins and can be changed during negotiations (Snyder and Diesing, 1977; Antonides, 1991). Internal power resources of governments are harder to observe and mostly linked to the diplomatic delegations of states. A distinct internal power resource is the bargaining skill of a negotiating party, particularly of the delegation leader (Snyder and Diesing, 1977; Hopmann, 1996). In the wider debate on leadership in negotiations, leading-through skills has been called ‘entrepreneurial’ leadership (Skodvin and Andresen, 2006) or ‘instrumental’ leadership (Underdal, 1998), as opposed to ‘power-based’ and ‘directional’ leadership. Indeed, skilled negotiators behave in a different manner during negotiations than their unskilled counterparts (Rackham, 1999). More specifically, highly skilled representatives are *inter alia* generally better prepared, ask more questions, explore more options, set clearer limits, and are more likely to consider long-term goals than their less skilled counterparts.

Internal power, and its skillful use, can lead to negotiation dynamics that cannot be explained by appeal to external power resources alone. Nevertheless, the role of internal power resources is often not considered in power-oriented negotiation analyses (Odell, 2010). Yet this source of power might be a crucial factor in understanding bargaining processes and explaining negotiated outcomes.

*H2: Countries with more internal power resources are better able to realize their goals in the climate change negotiations.*

### 3.2.Salience

In general, salience indicates the importance of an issue for an actor (Laver, 2001). However,

it is important to recognize that salience has an actor- and an issue-specific component... A whole policy field might be deemed particularly important or one could look at individual legislative proposals or even issues within that proposal. (Warntjen, 2012, p. 169)

In the present context, actor-specific salience indicates how important climate change is for a country, which in turn depends heavily on the expected consequences of a changing climate for a given country. The stakes are higher in the climate negotiations for those countries with higher vulnerability to climate change impacts and they will therefore lobby for higher mandatory emissions reduction goals.

A second dimension of actor-specific salience is the political vulnerability of countries to increased global mitigation efforts. Politically vulnerable countries might try to either slow the negotiations down, or demand compensations for their expected losses. An example of such obstructionist behaviour is Saudi Arabia (Depledge, 2008).

Negotiating parties with higher actor-specific salience might be able to assert more influence than others for whom the issue is less salient simply because it makes it difficult to ignore them (Fearon, 1994, 1997). In the context of climate change, such audience costs imply that otherwise dominant negotiation parties may come under pressure to take the concerns of less powerful but highly affected countries seriously. For example, the future of the Small Island Developing States (SIDS) is at stake if the climate negotiations fail and the sea level continues to rise unabated. Thus, having a high level of actor-specific salience can lend a country a high moral authority, which may become another source of power during negotiations (Jönsson, 1981).

However, it has been argued that countries with higher salience have tended to bear a greater portion of the costs associated with a climate treaty, as impatience to solve the problem has induced them to accept worse deals (Grundig et al., 2001, pp 162-165). In the EU context, it has been shown that countries that attach higher salience to an issue have tended to make larger concessions (Schneider, 2005) and that ‘the urgency that the negotiating member attributes to an issue decreases rather than increases the bargaining success’ (Bailer, 2004, p. 115).

*H3a:* The higher a country’s vulnerability to climate change impacts, the higher/lower the country’s likelihood of success in climate change negotiations.

*H3b:* The higher a country’s political vulnerability to increased global mitigation efforts, the higher/lower the country’s likelihood of success in climate change negotiations.

Although the effects of climate change on a particular country might explain why some countries are more concerned about the progress of climate change negotiations than others, less vulnerable countries may still attach high salience to specific issues of particular importance (see Warntjen, 2012). Evidently the salience levels highly vulnerable states attach to different issues can also vary as well: a low lying/small island country might hold that establishing a given emissions reduction target, or that adaptation finance, is the most crucial issue

*H4:* An increased level of salience a country attaches to a single issue (issue-specific salience) increases/decreases that country’s chances to finish negotiations on the issue successfully.

### 3.3. Extremity of negotiation positions

It has been shown in the context of European Council that some countries have adopted extreme positions relative to their negotiation partners to achieve certain goals (Schneider and Cederman, 1994). Adopted positions not only reflect an actor's preferences, but also reflect strategic choices that have been considered necessary to reach a desired negotiation goal (see Frieden, 1999; Morrow, 1999). Given the positions of other players in the negotiations, governments can choose their positions accordingly in order to influence negotiations. Thus, an extreme position on a negotiation issue may be the result of a state making a strategic choice and exaggerating its own sincere preference in order to encourage other players to move in the preferred direction.

However, adopting an extreme position in multi-party negotiations – as occurred in the EU negotiations (Bailer, 2004) - may increase the likelihood that the offending party will both be left out by other parties and (as a consequence) end up relatively far away from the subsequent negotiated outcome (Bailer, 2004). *Prima facie*, including the majority of the countries of the world in the UNFCCC negotiations, will further decrease the probability that a country can influence the outcome of negotiations by deliberately adopting an extreme position.

*H5*: Countries who adopt more extreme positions diminish their chances of success in the climate change negotiations.

### 3.4. Hard v soft bargaining strategies

Apart from using power resources, governments and their respective diplomatic delegations utilize various negotiation strategies. Researchers from distinct fields

such as business, psychology and law have attempted to analyze how negotiation strategies are best deployed in order to achieve success. In the field of international relations this has so far largely been neglected (Odell, 2010). Several ways of classifying negotiation strategies have been proposed (see Lax and Sebenius, 1986; Walton and McKersie, 1991; Carnevale and Pruitt, 1992; Hopmann, 1996; Dür and Mateo, 2008). In this article, Dür and Mateo's (2008) distinction between hard and soft bargaining strategies is used (see also Bailer, this issue).

The aim of using hard and soft strategies is to move negotiations closer to an outcome that is preferred by the party employing them. Hard bargaining strategies, i.e. conflictive or aggressive tactics, aim to benefit one country at the expense of another. Examples are threats and demands, which strong parties may use to directly influence the negotiating positions of supposedly weaker states (Matthews, 1989). Soft bargaining, defined as cooperative or friendly tactics (Dür and Mateo, 2008), strategies aim to advance negotiations for the mutual benefit of all the parties involved and include proposing solutions in the common interest (e.g. to overcome a stalemate) and compromise (Jönsson, 1981; Odell, 2002).

Whether a strategic behaviour is successful is heavily dependent on other attributes (e.g. power) of the actor employing. For example, if a great power threatens a client state with economic sanctions then it is more likely to succeed than if the client state were to threaten the great power. Hence, although the use of any strategy is theoretically open to each player, they must be used wisely in the international negotiations. Countries with a large amount of external power might resort to bullying less powerful states, through the use of hard bargaining strategies, into cooperating with their agendas. Equally, countries with little or no external power might compensate through the prudent use of soft bargaining strategies. . Thus, the

presence of power resources may be responsible for a country's choice of bargaining strategies. However, in the UNFCCC negotiations, even small states with little external power can use hard bargaining strategies due to the fact that every country has the power to veto a given proposal. Equally, powerful states might wish to demonstrate responsible leadership in the UNFCCC negotiations and choose to use soft bargaining strategies.<sup>3</sup>

It has been claimed that hard bargaining strategies can only be credibly employed by the most powerful countries (Pruitt, 1983). However, others have claimed that the use of hard bargaining strategies by weaker states might be successful if the issue of negotiation is particularly salient for them (Habeeb, 1988). Thus, four hypotheses regarding the relations between external power, hard and soft bargaining strategies, and issue-specific salience, and how they effect bargaining success are tested:

*H6a:* At high levels of external power, an increased use of hard strategies improves bargaining success (positive interaction).

*H6b:* At low levels of external power, an increased use of soft strategies improves bargaining success (negative interaction).

*H6c:* At high levels of salience, an increased use of hard strategies improves bargaining success (positive interaction).

*H6d:* A high levels of salience, an increased use of soft strategies improves bargaining success (positive interaction).

#### **4. Operationalization of the model**

Two newly created datasets were used to create the model: interview data gathered from UNFCCC meetings over an 11-month period (from AWG-KP 9/AWG-LCA 7 in Bangkok, September 2009, to AWG-KP 11/AWG-LCA 9 in Bonn, April 2010), and hand-coded delegate statement data gleaned from the *Earth Negotiations Bulletin* (ENB) over a 24-month period (from COP 13 in Bali, December 2007, to COP 15 in Copenhagen, December 2009). (See Appendix 1 for further details of the datasets.) Bargaining success was measured over the following eight climate policy issues:

- Annex 1 emission reduction targets
- Non-Annex 1 reduction targets and actions
- Use of market mechanisms
- Mitigation finance
- Mitigation allocation
- Adaptation finance
- Adaptation allocation
- Measuring, reporting, and verification (MRV)

##### **4.1. Measuring success**

Two measures of a country's bargaining success in the climate negotiations, the dependent variable, were used. The first success measure, the distance between a party's position as given in the interviews and the negotiated outcome at the Cancun Agreements in December 2010, was computed at the issue level: there were 58 countries and 8 issues in the interview dataset, and therefore 464 possible value of success. Due to the fact that some delegates did not answer all the questions posed in

the interviews, only 382 values of success were obtained.<sup>4</sup> The second success measure used the results of the first measure to generate one single, aggregate success value for each of the 58 countries in the dataset. Both quantities were used in the regressions as dependent variables.

Although it is a fairly common approach in negotiation research (see e.g. Arregui and Thomson, 2009; Thomson and Stockman, 2006; Steunenberg and Selck, 2006; Bailer, 2004; Bueno de Mesquita and Organski, 1994), the use of interview data in order to obtain the success measures carries certain risks, in particular measurement error<sup>4</sup>. The obvious problem is that the maximum distances from the original positions to the negotiated outcomes are different across issues, which hampers comparison across issues. Therefore, bargaining success (preference attainment) for the eight issues was standardized using the following formula:

$$suc1_{ij} = \left[ 1 - \left( \frac{|pos_{ij} - out_j|}{max_j} \right) \right] \times (100), \quad (1)$$

where  $suc1_{ij}$ =the success of country  $i$  on issue  $j$ ,  $pos_{ij}$ =the position of country  $i$  on issue  $j$ ,  $out_j$ =the outcome of issue  $j$ , and  $max_j$ =the maximal distance a country can have from the outcome on issue  $j$ . The absolute value in the numerator was taken to treat equal distances from the outcome alike, regardless of the direction a country's position deviated from the outcome. Without further adjustments, the first measure of success would range from 0 (most successful negotiation outcome) to 1 (least successful negotiation outcome). Thus, the resulting scores were subtracted from 1 and multiplied by 100 to yield success scores ranging from 0 (least successful) to 100 (most successful).



However, using this success score could potentially be quite misleading as a country might wrongly appear to be rather unsuccessful. For example, a delegation might be fairly satisfied with the outcomes of negotiations if it only really cared about one or two particular issues (and on which it might score relatively well). Yet such a country might appear to be a loser in the negotiations if success were measured only using formula (1). As Golub (2010) has observed, most studies of negotiation success use unweighted success measures as their dependent variables and are thus flawed. Moreover, including salience as an independent variable – as this and other studies do – is not sufficient to avoid potentially misleading results.

The second approach to measure bargaining success thus used salience weights to readjust the original success measures in order to account for how important each issue has been to each country (see Dür, 2008; Golub, 2010). The salience weights were manually coded from the negotiation protocols reported in the *Earth Negotiations Bulletins* (IISD, 2007-2009) (see Appendix 1). It was assumed that the more a country has discussed an issue, the more important it is to it. (This is congruent with a conception of salience as the ‘level of effort’ a country exerts in negotiations; see Bueno de Mesquita. 2003, pp. 589-590.) Thus, the fraction of statements a country made on the eight issues during the two-year period, between COP 13 in Bali, and COP 15 in Copenhagen (11 negotiation rounds and 90 negotiation days), were used as the salience weights.<sup>5</sup> The following formula, suggested by Munger and Hinich (1997, p. 80), was used to calculate the second measure of bargaining success<sup>6</sup>:

$$suc2_i = \sqrt{[suc1_i]^T A_i [suc1_i]}, \quad (2)$$

where  $suc2_i$ =a country's overall measure of success,  $[suc1_i]$ =a vector of success for all issues computed in (1), and  $A_i$ =a matrix containing the salience weights in the diagonal elements.<sup>7</sup> The off-diagonal elements represent interaction terms which measure how much success on one issue depends on the outcome of another. For example, small island states might highly value financial aid. However, if global emissions levels are not sufficiently reduced and they cease to exist due to rising sea levels, even very high amounts of adaptation finance will not help them. Hence, reducing emissions and financial aid theoretically show positive complementarity, yet there is unfortunately no procedure that can be used to calculate the size of the interactions (and in many cases it is even theoretically difficult to assess whether complementarity exists at all between two issues). Therefore, it was assumed that the issues are separable and the interaction terms were set to equal zero. Using matrix algebra, the resulting second measure of success is thus one single value for each country (for a list of all countries from most to least successful, see Appendix 3 ).<sup>8</sup>

## **4.2 Determinants of success**

The four putative determinants of bargaining success - the power of a state, the salience of an issue to a state, the extremity of a state's negotiation position, and the use of hard/soft bargaining strategies - were operationalized for the analysis as detailed below (see Table 1 for descriptive statistics of each independent variable).

### **4.2.1. Power**

External power: One of the main sources of a country's external power is economic power, which can be regarded as a coercive force in international negotiations (Keohane, 1984; Waltz, 1979). Large economies such as those of China and the US can make use of their size in order to force other countries with close economic ties

to lean their way in the negotiations. Thus, the logarithm of total GDP (World Bank, 2011) was used as the first measure of power.

Internal power: This was operationalized through the use of a country's delegation size, information that was obtained from the official UNFCCC participants list at the Cancun Climate Change Conference in December 2010 (UNFCCC, 2010). It might be argued that richer (more economically powerful) countries can send more people to international conferences and that therefore, delegation size should be used to represent the external power of a state. However, governments are able to choose and control the size of their delegation. I find a relatively high positive correlation of delegation size with both bargaining skills and total GDP of over 0.5, indicating that the size of a diplomatic delegation is indeed a function of power, but also an indicator of a party's bargaining skills. As I control for power in all models, delegation size thus represents internal power in this paper.

#### **4.2.2. Saliency**

Actor-specific saliency: Given the two dimensions of actor-specific saliency, two operationalizations were required. First, how vulnerable a country is to climate change impacts (hypothesis *H4a*) was measured using the Environmental Vulnerability Index (EVI) developed by the South-Pacific Applied Geoscience Commission (SOPAC) and the United Nations Environmental Programme (UNEP). In total, the EVI measures 50 indices, 13 of which are used to construct a sub-index for climate change vulnerability (see Kaly et al. , 2004). Although the EVI has been criticized for various reasons (see Barnett et al., 2008), - for example, on the grounds that it is impossible to quantify complex social-ecological processes - this criticism is not particular to it and applies to all indices that measure vulnerability.

Second, political vulnerability, was measured by a country's share of global GHG emissions. This variable was constructed using the CO<sub>2</sub> emissions of all countries as reported by the UN (2011) in the Millennium Development Goals Indicators (MDGIs).

Issue-specific salience: This was measured by calculating the fraction of statements a country has made on the eight issues, listed above, from Bali in 2007 to Copenhagen in 2009, as reported in the ENB (IISD, 2007-2009). Some parties, particularly smaller countries, only made a limited number of interventions even over the two-year period. Therefore, these individual statements only made up 50% of the final salience scores, while the remainder was derived from group statements of a country's most important negotiation coalition. This issue-specific salience was only included as an independent variable in the models that used the first measure for success. It was also used to construct the  $A_i$  matrix of formula (2), used to calculate the values of the second measure of success.

#### **4.2.3 Negotiation position**

The extremity of a country's position on a negotiation issue was measured by the distance to the mean position in the dataset. Thus, extremity values for all eight issues of interest were computed for, and tested with, the first success measure. The mean extremity values for each country, over the six variables, were then used to construct the second success measure and used to test hypothesis *H5*.

#### **4.2.4. Hard and soft bargaining strategies**

During the first round of interviews, negotiators were asked to assess, on a scale from 1 (never) to 9 (very often), how often they used ten (three soft; seven hard) kinds of negotiation strategies. The three soft bargaining strategies were proposals in the common interest, exchanges of concessions, expressions of understanding for

other country's positions; the seven hard bargaining strategies were threats, promises, direct criticisms, open declarations not to change a position, demands for concessions from others, ignoring demands of others, and hiding one's real negotiation objectives.<sup>9</sup> As with measuring a country's negotiation positions, quantifying their strategic behaviour using the interview data risks similar measurement error.<sup>10</sup> The indicators for the bargaining strategies used in the calculations below were derived by taking the mean over all hard and then all soft bargaining strategies. To operationalize hypothesis *H3* interaction terms between the independent variables of hard/soft bargaining strategies and external power, and between hard/soft strategies and salience, were constructed yielding four interaction terms.

---Table 1 about here---

## **5. Results**

Table 2 lists the main findings. All the models used OLS with clustered standard errors to account for the particular structure of the climate change negotiations, i.e. the collaboration of negotiating parties in coalition groups.<sup>11</sup> Models 1 to 4 used the first success measure as the dependent variable, while Models 5 to 7 utilized the second success measure.

---Table 2 about here---

### **5.1. External power**

The external power variable total GDP (in logarithmic form) was highly significant in almost all the model specifications and suggests, unsurprisingly, that an increase in power has improved the probability of success in the climate change

negotiations.<sup>12</sup> The size of the effect was considerable across the models. Using the coefficient shown in Model 1 of Table 2, *ceteris paribus* a success score more than 30 points higher, at the maximum of total GDP than that for the lowest levels of GDP, would be expected. The results provide relatively strong evidence for the validity of hypothesis *H1*.

## **5.2. Internal power**

In all the models tested, the influence of the internal power of a country, measured by delegation size, fell far short from conventional significance levels. In addition, the size of the coefficient across all models was very small. Only when total GDP was omitted from the regressions did the coefficient on delegation size become significant, indicating – contrary to the assumption (see Section 4.2.1) - that it was acting as a proxy for external power rather than internal power. Yet when external power was controlled for by other means, the effect of internal power on bargaining success was negligible. The results therefore cast doubt on the validity of hypothesis *H2*.

## **5.3. Actor-specific salience**

The first actor-specific salience factor, vulnerability to climate change impacts, persistently showed significant positive coefficients across the models (with the exception of Model 7), which indicates that higher vulnerability has tended to increase bargaining success, thus providing some support for hypothesis *H3a*. The size of the coefficient was fairly stable at around 5 for both success measures, yet the significance level dropped somewhat when using the second success measure. Employing the coefficient of 4.99 found in Model 1 for computational purposes, it was found that, between the minimum (1.67) and the maximum (4.9) observed

vulnerability levels, the expected difference of success was 16.12 (i.e. slightly less than one-sixth of the maximum possible success difference in the dataset).

A negative significant effect of political vulnerability was found, indicating that a higher share of global GHG emissions has been detrimental to a country's bargaining success, thus undermining hypothesis *H3b*. Although the significance of the coefficient was somewhat weaker than in the GDP case, the persistence across the models accords some credibility to the results (even the exception, Model 3, was close to significance).

It is interesting to note that those countries that are highly vulnerable to climate change impacts appear to have some negotiation leverage over those countries that are large GHG emitters. However, the view that the vulnerability of a state to climate change may assist it in pressurizing large GHG emitting states to cooperate would be too simplistic for two reasons. First, large GHG emitters also tend to be highly powerful. Hence the negative effect of higher CO<sub>2</sub> emissions is likely to be offset by the strong positive effect that external power has on negotiation success. Equally, it is likely that the positive effect of vulnerability on bargaining success will only partly make up for the lack of power of small states. Second, and following on from this, some powerful countries are also relatively vulnerable (as measured by the EVI) to climate change impacts (e.g. Germany at 4.15, China at 3.85). Hence, there is an even more direct, salience-related source for these countries – vulnerability to climate change impacts - that offsets the negative effect of emitting GHGs. Consequently, the result that vulnerability to climate change has had positive effects on UNFCCC negotiation success should not be interpreted as inconsistent

with the dominant view that the most powerful countries are the most influential in the climate negotiations.

#### **5.4. Issue-specific salience**

Using the first success measure, issue-specific salience was not significant across any of the model specifications tested, thus casting doubt on hypothesis *H4*. The issue-specific salience coefficient did in one case, however, come close to significance when it was tested for interactions with hard/soft bargaining strategies. To further investigate this coefficient, the appropriate formula presented by Brambor et al. (2005, see web appendix, Table 1, Case 3) was used. At very low levels of using soft bargaining strategies, issue-specific salience displays negative marginal effects (see Figure 1). The marginal effect of issue-specific salience was insignificant for all other combinations of bargaining strategies. The left hand panel of Figure 1 shows that with soft bargaining strategies fixed at 1, salience negatively impacted success at all levels of hard strategies. At higher levels of soft strategy use, shifting the whole curve upward, the marginal effects of salience became insignificant. Changing the level of hard strategies in this setting had little influence on this salience effect due to the rather small effect of the interaction coefficient. The right hand panel of Figure 1 confirms this. Levels of soft strategic use below the value of 3 cause the marginal effects of salience to be negative. Changing the level of hard strategies (fixed in the graph at 5) makes little difference as the curve barely shifts. Hence, there is some evidence that at higher levels of issue-specific salience negotiators should employ soft bargaining strategies to emphasize the importance of a negotiation issue, lest their concerns be ignored. Thus, the results support to some extent hypothesis *H6d*. On the other hand, the use of hard bargaining strategies does not appear to



significantly change the salience-effect on bargaining success, thus casting doubt on hypothesis *H6c*.

---Figure 1 about here---

### **5.5. Extremity of negotiation position**

Taking extreme positions during the climate change negotiations has greatly diminished bargaining success. A move away from the average position in the sample reduced the success score by between 0.58 (Model 2 of Table 1) and 1.00 (Model 4). This holds true for both measures of success and the corresponding extremity variable. Furthermore, the coefficient on extreme positions was significant at the 99% confidence level across all tested models, supporting the validity of hypothesis *H5*. This is probably the strongest finding of this study.

For example, the US had the second highest average extremity score across the eight issues (52.8), which is one of the reasons why the most powerful country in the world was relatively unsuccessful at the negotiations, with one of the lowest overall success scores in the dataset (see Appendix 3).<sup>13</sup> However, it should be kept in mind that the Cancun Agreements were assumed as the reference point. Due to the perceived failure of the Copenhagen Climate Change Conference, an increase in domestic skepticism regarding the negotiations, and the sustained economic crisis, the Obama administration consequently paid little attention to the issue of climate change (see e.g. Brewer, 2012, p. 7-10). Moreover, the Cancun Agreements must be seen as a provisional step in the continuing climate negotiations. Hence there is still time for powerful actors to achieve their goals. The US could still be an influential and indeed crucial player if it so chose.

## 5.6. Hard and soft bargaining strategies

The coefficients on both hard and soft strategies, when interacted with economic power, were insignificant and had comparably large standard errors. The same was true for the corresponding interaction effects. Hence the use of these strategies by a country has not significantly increased bargaining success if external power is taken into account. Thus, the results cast doubt on hypotheses *H6a* and *H6b*. As already mentioned in Section 5.4, a similar result was obtained for the use of hard bargaining strategies when issue-specific salience is taken into account. However, when issue-specific salience is taken into account, soft bargaining strategies were both highly significant (Model 4, Table 2), as can be seen in Figure 2. Although an increased use of soft strategies exhibits negative marginal effects at very low levels of issue-specific salience, it exhibits positive marginal effects in combination with salience levels above 70. Thus the data lends some support to hypothesis *H6d*.

---Figure 2 about here---

## 6. Conclusions

The presented analysis suggests that bargaining success has been positively affected by a country's external power and vulnerability to climate change impacts and negatively affected by the extremity of a country's negotiation position and its share of GHG emissions. Additionally, there is some support for the view that the use of soft bargaining strategies in the climate change negotiations by a country has increased the likelihood of bargaining success over issues that have been highly salient to it. Particularly the results obtained for power, vulnerability to climate change impacts, the share of greenhouse gases, and the extremity of positions are

rather stable over various model specifications for both of the dependent variables proposed above.

Some of the large countries, in particular the US and China, were not particularly successful in the negotiations over any of the eight issues examined (see Appendix 3 for detailed statistics). Although both are highly powerful, their extremely large share of GHG emissions, and the extremity of their negotiation positions (especially for the US), were detrimental to their bargaining success. This is rather surprising given that most accounts of the climate change negotiations claim that powerful countries, such as the US, China, India and Brazil, have the most influence (see e.g. Dimitrov, 2010b; Cozier, 2011). So how can the results of this study be aligned with the usual interpretation of the negotiation process?

The effects of the independent variables on the bargaining success of countries involved in the UNFCCC negotiations over the eight issues specified in Section 4 were assessed at the aggregate level, e.g. Annex I emissions reduction targets. If the UNFCCC specifies these issues at the aggregate level, then Member states can accept an official document - in this case the Cancun Agreements - without agreeing to any binding commitments individually. For example, as a part of the Cancun Agreements, developed countries committed starting in 2020 to jointly mobilize US\$100 billion a year for both adaptation and mitigation. This bargaining solution makes the US - which according to the interview and submissions data prefers paying for adaptation and mitigation using a mix of voluntary donations and contributions through market mechanisms - an apparent loser on the issues of mitigation and adaptation finance as the (aggregate) commitment of developing countries to donate \$100 billion annually is far away from the US bargaining position. However, it is likely that the US will actually only provide a small

proportion of the \$100 billion each year. Similarly, although it is recognized in the Cancun Agreements that a 25-40% reduction of emissions (below 1990 levels) by Annex I Parties is needed by 2020, there is little inclination by these Parties to make any such binding commitments.

For an environmental treaty to be effective, it must ensure both participation and compliance, while setting meaningful targets (Barrett, 2008, pp. 240-241). If the UNFCCC is unable to deliver such results, the whole negotiation process is in danger of losing both legitimacy and credibility. It has been shown that powerful countries such as the US, Russia and China have not been particularly successful, with respect to the eight issues analyzed, in the climate change negotiations. Thus, this could be an indication, that these countries have lost faith (if there was any to begin with) in the legitimacy and credibility of the negotiations. At the least, the analysis might indicate that these countries have not made as much of an effort to cooperate and succeed in the negotiations as they might have if they still considered the negotiation process fully functional. A less pessimistic interpretation would be that, because the Cancun Agreements represents an intermediate stage of the international climate change negotiations, the results of the analysis might not accurately reflect the countries attitudes or preferences towards the UNFCCC negotiations. While a future climate treaty may of course more accurately reflect the preferences of the major players in the climate change negotiations, it is clear from the analysis that the negotiation process hangs in the balance.

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## Notes

1. This statement, received on March 2, 2011, was made via e-mail in response to a follow-up question asked in a face-to-face interview conducted during one of the many conferences visited by members of the research team. The question asked negotiators to assess the negotiation success of a number of other delegations regarding the Cancun Agreements.
2. For example Bolivia, regarded as one of the big losers of the past two COPs in Copenhagen and Cancun, was compensated by the General Assembly of the UN with the recognition of the country's long time goal of making access to clean water and sanitation a basic human right.
3. Some interviewees refused to answer one or more of the questions, some felt unable to answer some of them, and some had to cut the interview short due to a lack of time.
4. Due to the fact that only one delegate per country was interviewed, the risk of measurement error was quite high. In order to attenuate this problem, the interviews were compared with party data submitted to the UNFCCC (see Appendix 1). Only three of the eight issues contained in the interview dataset – emissions reduction targets, mitigation finance, adaptation finance - were coded in exactly the same way as in the submissions data set and were directly comparable. However, these issues showed relatively high correlation coefficients of 0.92, 0.70, and 0.69, respectively. Although the overlap is far from perfect, this lends the interview data a measure of credibility.
5. Merely counting how often each issue has been mentioned by a party during negotiations and using this as the salience measure would not be appropriate without further adjustment due to the fact that the total number of interventions has varied widely across negotiating parties. This would result in incomparable success scores when applied to formula (2). Hence, the salience weights were standardized by dividing the number of statements a country has made on an issue by the total number of intervention it has made on the eight relevant issues. The resulting success measures thus sum up to 1, regardless of the total number of interventions a country has made, thus preventing distortion of the weights for each country and permitting comparison across countries. The salience weights used thus consisted of the fraction of all statements a country has made on the different issues.
6. Note that instead of the raw distances to measure success proposed by Munger and Hinich (1997), the standardized distances obtained using formula (1) were used.
7. As mentioned, some delegates did not answer all the questions. In such cases, the calculated success score was biased downwards, i.e. the country appeared to be less successful than it may in fact have been (unless the missing success score would in fact have been 0). It was assumed that success for the missing issues has been similar to those for which success values were obtained, and the second measure of success thus had to be adjusted. As I obtained salience weights for all issues, I was able to compute the combined weight of the missing values and adjust the obtained success score accordingly (see example below in this endnote). For countries with no missing scores (the majority of the countries in the dataset), this weights of missing values was zero and thus the value for the second measure of success did not change. If, however, one issue was missing and the salience weight for this issue was, say, 0.2, the country score for success was too small (unless it did not achieve any success on the issue). If the country score for the remaining issues was, say, 45, then this was adjusted accordingly (e.g.  $45/(1 - 0.2) = 56.25$ ). This method - which worked particularly well for those countries for which information on only one or two positions was missing - yielded the average success score of the issues and the bias vanishes. For countries missing much or most of the data, however, this method would be very misleading. Fortunately, there were only a few countries for which there were many missing data points.



8. For calculating the second measure of success, the issues of mitigation allocation and adaptation allocation were omitted from the analysis, as salience weights were not obtainable for them. Hence, only 288 of the 382 success values originally obtained using formula (1) were used to construct the values reported in Appendix 3.
9. See Bailer (this issue) for a more general discussion of hard and soft bargaining strategies.
10. Unfortunately, the use of hard and soft strategies by a state cannot be checked as easily as the negotiation positions using other data sources. This is because coding the strategies on the basis of the ENB and UNFCCC submission data is very difficult and highly unreliable.
11. The coalition groups for which cluster-corrected standard errors were computed were the EU, the Environmental Integrity Group (EIG), the Umbrella Group, G77 and China, the African Group, the Least Developed Countries (LDCs) and the Alliance of Small Island States (AOSIS). Note that each country was only assigned to one of these clusters (that indicated as the most important negotiation group during the interviews). Note, however, that some countries are members of more than one coalition. For example, although Comoros is a member of AOSIS, the LDCs, the African Group, and G77/China, the interview data suggested that it has regarded AOSIS as the most important coalition group and that most likely to achieve its goals.
12. When the effect of total GDP on choice of negotiation strategy is modeled, the significance of total GDP diminished and in some cases even vanished, despite the fact that the interaction terms themselves were not significant. In the case of Model 3 the significance remained over the whole range of both hard and soft strategies, although at lower *p*-values than without interactions. Model 7, however, was the exception as it exhibited no significance for total GDP over the entire range of both hard and soft strategies.
13. Other powerful negotiating parties appear to have taken comparatively moderate positions. For example, the average extremity value for China was 20.6, India 16.7, the EU 12.9, and the Russian Federation 34.7.

## **Appendix 1 Descriptions of datasets**

The three datasets collected over the past two years by the research team are described. Note that full descriptions of the single variables used in this article are not given.

### a) Interview data

A total of 60 interviews with 56 different country delegations, plus a delegate from the EU and an expert and close adviser of the LDCs were conducted (note that Indonesia and Bangladesh were interviewed twice). The interviews covered delegates from countries in all 5 continents and world geographical regions, and all UNFCCC coalition groups, and were therefore considered to be representative of all the possible positions in the UNFCCC negotiations.

The interviews were mostly conducted face-to-face, and took place during the three UNFCCC negotiation meetings in 2009 (Bangkok, Barcelona , and Copenhagen) and the three meetings in Bonn in 2010. Some interviews were conducted by phone during the same period of time. Interviews were divided into three different blocks of questions (plus a short introductory block on delegation size and composition) regarding country position, negotiation strategy and influence of institutions and stakeholders. First, delegates were asked to indicate their own country's position on eight negotiation issues during the negotiations (see Appendix 2). The issues and the definition of their extreme points were previously identified by the project team, which included Axel Michaelowa, a close UNFCCC negotiation observer and climate expert. All issues, apart from mitigation targets, were measured on a scale from 0 to 100.

Delegates were requested to provide the value on this scale that best reflected their country's position. The scale was designed in each case to cover all possible positions on the relevant issue. For example, for the question 'Who should primarily finance the action on adaptation?', a value of 0 corresponded to 'Voluntary financing by the private sector' while a value of 100 corresponded to 'Mandatory financing of around \$100bn per year by industrialized countries'. In addition, respondents were asked to describe their position in words in order to aid the identification of the country position on the scale. Second, negotiators were asked to rate, on a scale from 0 (never) to 9 (very often), how often their delegations had used ten kinds of bargaining strategies (see Bailer, this issue, for a more detailed description). Finally, negotiators were asked to rate, on a scale from 0 (very low) to 9 (very high), the influence of 15 institutions/stakeholders (e.g. the economics and environment ministries, the national parliament, different industries, NGOs, national and international media, the public), on their country's negotiation positions.

b) *Earth Negotiations Bulletin* data

The *Earth Negotiations Bulletin* (ENB), published by the International Institute for Sustainable Development (IISD), has been reporting on a host of international environmental meetings and negotiations since 1992. An issue of the ENB is published for every day of the UNFCCC negotiations, which includes a summary (which is usually one sentence long) of every statement made by the negotiation parties in the publicly accessible meetings.

All the ENBs on the climate change negotiations during the two-year period from COP 13 in Bali (December 2007) to COP 15 in Copenhagen (December 2009) were hand-coded. This period contained 11 negotiations rounds and a total of 90 negotiations days. For every statement reported four properties were recorded. First, who made the statement; second, which segment of the negotiations were made in (e.g. COP, AWG-KP, COP/MOP, AWG-LCA, SBI, SBSTA); third, the main topic of the statement (e.g. mitigation, adaptation, finance, measuring, reporting and verification), any sub-categories, and (if applicable) the kind of bargaining strategy used; fourth, whether the statement was issued by a single country or jointly (and who they were) and whether it was later supported or opposed (and if so, by whom). After the statements of each negotiation day were coded, they were aggregated for every negotiation round, and finally combined to obtain estimates for the whole two-year period. Thus, in addition to providing a general overview of the salience of each issue (i.e. which topic was debated and how often) and how much each country cooperated (i.e. how many joint statements there were and by whom they were supported), the dataset provides a summary of how these important quantities have evolved over time.

Although the ENB does not always record every single statement made during the negotiations, most statements are reported. The possibility that Missing statements might thus cause the variables derived from the ENBs to be somewhat distorted, a possibility that deserves to be noted here.

### c) Submissions data

Submissions present the views and positions of negotiation parties in written form. Countries have the option to submit written statements on various issues to the UNFCCC prior to the negotiation meetings, which are then compiled into official negotiation documents. All submissions sent to the two working groups operating during the two-year period - the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) and the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) - were hand-coded (covering a total of 43 official UNFCCC documents, which summarized these submissions and more than 1,600 pages of proposed legal text). A codebook was designed, which was tested on about 50 pages by three different people, to confirm inter-coder reliability. The main aim of this whole coding process was to generate a dataset with the negotiation position for all countries on the issues of emissions reduction targets, the use of market mechanisms, mitigation and adaptation finance, and MRV.:

The issues were coded on a scale ranging from 0 to 100, whilst attempting to emulate as closely as possible the issues of the interview dataset (note that there was a bigger sample of countries for the submissions). As both submissions of individual countries as well as group submissions were coded, a decision was regarding how best to combine these different sources of information. It was decided that individual submissions for a country regarding a given issue were to be given preference over group submissions. If more than one individual country submission was coded regarding a given issue, then the average was taken. If there were no individual submissions for a country regarding a given issue, then the group submissions of the most important

negotiation group of that country were taken as proxies. This assumption was justified on the grounds if the group position of the negotiation group that the country belongs to did not accurately reflect its own views then the delegation would have formulated its own submission. When there multiple group submissions on a given issue, the average was taken.

## **Appendix 2**

The eight policy issues for which bargaining success was measured are listed and some of the main features of the results are given.

- Annex I emissions reduction targets: The average success rating of this issue was 33.8. Russia had the highest success rating, while Bolivia had the lowest.
- Non-Annex I emissions reduction targets and actions: The average success score was 61.9. A number of countries achieved the highest possible value of success (Argentina, Bolivia, China, Colombia, Egypt, Georgia, Ireland, Mexico, Namibia, Nigeria, Philippines, South Africa, Sri Lanka, and Vietnam). The countries with the lowest success value were Belize, Comoros, Tajikistan, Togo, and the US.
- Use of market mechanisms: This dimension measured how much a country desired market mechanisms to play an important role in financing adaptation and mitigation. The average success score was 75.1. The maximum success rating was achieved by Bangladesh, Belgium, Belize, Egypt, Ethiopia, Hungary, Japan, the Maldives, Mexico, the

Netherlands, New Zealand, Nigeria, Norway, Panama, Russia, Slovenia, Sweden, Tajikistan, the UK, and Vietnam. Micronesia and Namibia did not succeed at all in bargaining over this issue.

- Mitigation finance: The average success value was 65.9. The Philippines achieved the highest possible score, and the US achieved the lowest score of 0.
- Mitigation allocation: The average success value was 54. The highest scores were obtained by Russia, Sweden, the US, and the UK. China and Vietnam had the lowest scores.
- Adaptation finance: The average success rating was 45.7. Only the Netherlands obtained the maximum score, while the US again obtained the lowest success value of 0.
- Adaptation allocation: The average success score was 64.2. No country obtained the exact winning point, while the US and Vietnam obtained the lowest success value.
- Measuring, reporting, and verification (MRV): The average success score was 22.8. This suggests that many countries scored did not score particularly well on this issue. Indeed 35 of the 47 countries that answered question regarding MRV were very far away from their desired outcome. However, Argentina, Belgium, China, the EU, Germany, Hungary, and the UK were all successful in their negotiations over this issue.

### Appendix 3 Overall success of countries including salience weights

Rank	Country	Success
1.	New Zealand	95
2.	Hungary	82.8
3.	EU <sup>a</sup>	81.8
4.	Belgium	79.6
5.	Japan	78.7
6.	United Kingdom	78.2
7.	Russian Federation	77.9
8.	Norway	76.1
9.	Austria	75.5
10.	Germany	74.7
11.	Slovenia	73.1
12.	Mexico	72.1
13.	Netherlands	71.7
14.	Ireland	68.2
15.	Sweden	65.4
16.	Switzerland	64.0
17.	Ethiopia	62.7
18.	Nigeria	62.5
19.	Belarus	57.2
20.	Colombia	56.2
21.	Vietnam	56.1
22.	Argentina	55.7
23.	Egypt	52.0
24.	Papua New Guinea	50.0
25.	Indonesia	49.9
26.	China	48.9
27.	South Africa	46.8
28.	Mali	46.0
29.	Philippines	43.8
30.	Belize	42.2

Rank	Country	Success
31.	Tajikistan	42.0
32.	Maldives	41.2
33.	Bangladesh	39.5
34.	Algeria	37.3
35.	Peru	36.4
36.	United Arab Emirates	36.2
37.	Canada	35.4
38.	India	35.1
39.	Uganda	34.1
40.	Mauritania	32.6
41.	Ghana	30.8
42.	LDCs <sup>b</sup>	30.7
43.	Panama	30.6
44.	Samoa	30.2
45.	Botswana	29.8
46.	Namibia	29.7
47.	Costa Rica	29.5
48.	Zambia	28.9
49.	Tanzania	27.1
50.	Kiribati	26.6
51.	Nepal	25.9
52.	Sri Lanka	24.6
53.	Micronesia	15.8
54.	United States	15.4
55.	Togo	12.3
56.	Bolivia	11.7
57.	Comoros	0
58.	Georgia	0

Note: <sup>a</sup>Although the EU participated in the negotiations, and had its own separate delegation separate from those of its member states, it was not included in the analysis.

Note: <sup>b</sup>The answers for least developed countries as an aggregate group were provided by an expert working closely with the LDCs as one of the official coalition groups. As in the case of the EU, the aggregate success scores of the LDCs were also not included in the analysis.



**Table 1** Descriptive statistics of the dependent and independent variables

<b>Variable name</b>	<b>Obs.</b>	<b>Mean</b>	<b>St. dev.</b>	<b>Min.</b>	<b>Max.</b>
Success 1 <sup>a</sup>	382	52.50	32.01	0	100
Success 2 <sup>a, b</sup>	58	46.80	22.59	0	95
Log of GDP <sup>c</sup>	58	26.05	2.65	18.66	30.42
CO <sub>2</sub> emissions <sup>d</sup>	58	1.33	4.03	0.00	23.55
Vulnerability <sup>e</sup>	58	3.36	0.73	1.67	4.90
Saliency <sup>b</sup>	348	16.66	13.56	0	100
Delegation size <sup>f</sup>	57	43.42	35.81	5	173
Extremity of position (issue-level) <sup>a</sup>	367	18.98	14.08	0.17	85.17
Extremity of position (mean) <sup>a</sup>	57	19.34	9.74	1.97	62.08
Hard strategies <sup>a</sup>	58	4.06	1.66	1	9
Soft strategies <sup>a</sup>	58	4.99	1.64	1	9

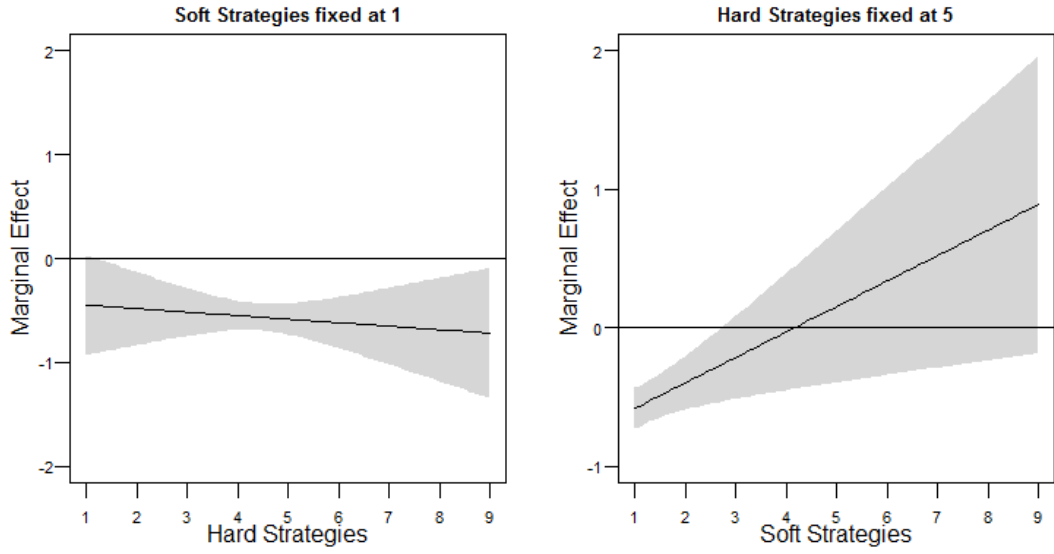
*Sources:* <sup>a</sup>Interview data; <sup>b</sup>ENB data; <sup>c</sup>World Bank (2011); <sup>d</sup>UN (2011); <sup>e</sup>Kaly et al. (2004); <sup>f</sup>UNFCCC (2010).

**Table 2** Regression results using success measures as dependent variables

	<b>Dependent variable: Success 1</b>				<b>Dependent variable: Success 2</b>		
	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>
<b>Log of GDP</b>	3.79*** (1.01)	3.40*** (0.70)	4.43* (1.96)	3.97*** (1.01)	5.91*** (1.44)	5.67*** (1.03)	5.41 (4.09)
<b>Delegation size</b>	0.01 (0.08)		0.02 (0.08)	0.02 (0.09)	-0.03 (0.09)		
<b>Vulnerability</b>	4.99** (1.97)	3.18* (1.69)	5.42** (2.29)	4.93** (1.90)	5.11* (2.39)	5.01* (2.61)	4.64 (3.06)
<b>Emissions (% of global)</b>	-0.76* (0.34)	-0.89* (0.49)	-0.58 (0.33)	-0.66* (0.34)	-1.38** (0.43)	-1.43** (0.57)	-1.71** (0.67)
<b>Saliency</b>	-0.14 (0.24)		-0.14 (0.24)	-0.60 (0.32)			
<b>Extremity of positions</b>	-0.91*** (0.15)	-0.58*** (0.10)	-0.98*** (0.13)	-1.00*** (0.13)	-0.74*** (0.16)	-0.74*** (0.16)	-0.69*** (0.12)
<b>Soft strategies</b>			4.11 (12.51)	-3.64*** (0.88)			-9.38 (19.81)
<b>Hard strategies</b>			-1.55 (9.24)	-0.15 (1.92)			5.00 (22.63)
<b>GDP*Soft strategies</b>			-0.19 (0.49)				0.42 (0.80)
<b>GDP*Hard strategies</b>			0.03 (0.35)				-0.21 (0.91)
<b>Saliency*Soft strategies</b>				0.18** (0.08)			
<b>Saliency*Hard strategies</b>				-0.03 (0.08)			
<b>Intercept</b>	-41.25 (29.97)	-31.54 (20.53)	-50.92 (53.46)	-30.12 (27.91)	-100.48** (35.58)	-95.42*** (26.63)	-90.53 (96.56)
<b>N</b>	278	368	278	278	56	56	56
<b>R<sup>2</sup></b>	0.14	0.09	0.15	0.16	0.56	0.56	0.56
<b>adj. R<sup>2</sup></b>	0.12	0.08	0.12	0.13	0.50	0.52	0.49
<b>Resid.sd</b>	31.71	30.85	31.79	31.58	15.79	15.50	16.02

Note: Cluster-corrected standard errors are given in parentheses. Models 1 and 3-5 include fossil fuel rents as additional controls; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

**Figure 1 Marginal Effects of Salience**



**Figure 2 Marginal Effects of Soft Strategies**

