This paper is a draft for the background report which will supplement the SIPRI-SPITS joint report *United Nations Arms Embargoes: Their Impact on Arms Flows and Target Behaviour*. The main report is available online from 26 November 2007 and the final version of this paper will be available in the end of December 2007. The main difference between this draft and the final version lies more in form (references and language) than in content, however some formulations might differ so please do not quote, or cite until the final version is available. If referring to this in other manners please add the following to the title below: Draft, version November 2007

UN ARMS EMBARGOES AND TARGET BEHAVIOUR, 1990-2006

INTRODUCTION

This paper accompanies the report *United Nations Arms Embargoes: Their Impact on Arms Flows and Target Behaviour*. With this paper additional issues are presented which were not included in that report, due to restrictions in page numbers, but which might nevertheless be of interest to researchers in the field of third party intervention in general and UN arms embargoes in particular. The focus of this paper is on theoretical and methodological issues pertaining to behaviour of targets facing arms embargos. The Stockholm International Peace Research Institute has in parallel produced eleven case studies to supplement the arms flow discussions in the main report. The underlying motivation for the project and the results are not included here since they are available in the main report.

The question guiding this paper and the behaviour sections of the joint report is: *Do UN Arms Embargoes compel targets to improve their behaviour in line with UN Security Council (UNSC) demands and end goals?*
In order to address this question arms embargoes will be studied in three stages: the threat, the implementation, and the ending. Previous studies have indicated that it is important to increase the understanding of the deterrent impact of sanctions.\(^1\) The importance of proper implementation has also been stressed before.\(^2\) The case for studying endings of embargoes is the fact that the United Nations termination of sanctions has been performed using different mechanisms, perhaps with different results.

UNSC demands and end goals may be of unofficial character and be broader or narrower than those officially stated. Often cited are narrow goals such as using sanctions to either show resolve to international trouble-makers or to demonstrate for domestic audiences that something is being done to solve problems.\(^3\) Here, however, the goals and demands that are analysed are those that are officially stated, or clearly implied, in the resolutions issued by the UNSC.

In the following a theoretic framework is used to produce three main hypotheses for the three stages. Thereafter the research design is further elaborated on and a number of control variables are presented. Again, all results are presented in the main report.

THEORY

The main dependent variable to be explained here is target behaviour. A previous study, by Hovi, Huseby and Sprinz, contains an analytic framework that explains the impact of threats


on behaviour, and which also has some implications for imposed sanctions.\textsuperscript{4} Two aspects of that theory will be drawn on here, one concerning the impact of threats, and the other for the imposition of sanctions. As for the ending of sanctions the theoretical backing changes slightly by drawing on a more context-specific argument.

The main idea that focuses the analysis of threats is that threats of sanctions will fail if the target either perceives that the threat is not \textit{credible} or if the target believes that the \textit{costs} of having sanctions imposed are lower than the benefit of continuing the deviant behaviour. Here the focus on the threat phase is delimited to the credibility of threats. Therefore the first hypothesis states that:

H1: The more credible the threat of arms embargoes the greater the improvement in target behaviour.

If threats fail Hovi et al. argues that, on average, subsequently imposed sanctions have a very limited chance of changing target behaviour. Target behaviour can however change after sanctions are imposed if the target either finds out that what it believed to be a non-credible threat is in fact credible, or if the target miscalculated the costs associated with sanctions. According to Hovi et al. misperceptions and miscalculations will be adjusted soon after the sanctions are imposed and therefore if the targets yields it will do so sooner rather than later.

What Hovi et al. do not consider, since they look at sanctions in general, is that when the sender is not a unitary actor, but rather an organisation, the costs of the sanctions might not even be clear to the senders before the sanctions are imposed. The reason for this is that the implementation mechanisms are often not finalised until soon after the sanctions have already been imposed.\textsuperscript{5} It can therefore be expected that: if arms embargoes are supported by proper implementation, the influence on targets’ behaviours will be greater compared to the impact of arms embargoes in general.

H2: The better the implementation of arms embargoes the greater the improvement in target behaviour.


\textsuperscript{5} See table 3.2 of the main report for the imposition years and the years that various implementation mechanisms were set up.
Although the hypothesis will capture the impact of costs due to arms embargoes, note that the costs does not necessarily have to be so great that there is a notable influence on patterns of arms acquisitions. It is enough that the costs associated with acquiring arms are high enough to make yielding to the demands of the UN the preferred option. To gain a more complete understanding of the impact of arms embargoes, the objective of the main report, to investigate arms flows as well as target behaviours, is in deed crucial.

Concerning the correlation between the ending of arms embargoes and improved target behaviour the fact that the sanctions are issued by an organisation such as the UN is again important. Issuing or removing sanctions through the Security Council will generally be slower processes than imposing unilateral sanctions. Whenever mandatory sanctions are imposed all P5 members have found the decision acceptable. Furthermore the raison d’etre of the UN is to promote peace and security and in those fields its reputation is important. It can therefore be argued that:

H3: The UNSC will maintain arms embargoes until it is certain that positive developments in target behaviour are likely to continue past the short-term.

Additional hypotheses in relation to the control variables will be mentioned in the research design chapter, under the respective headings of Threatened embargoes, Embargo Implementation and Ending Embargoes.

RESEARCH DESIGN

THREATENED EMBARGOES

Selection of Observations
The observations of threats are made yearly. This means that if there are several threats against a target starting in January 2000, and if they continue until January the next year, the...
threats are considered to be one observation. If however they continue more than a month into the next year, the threat is considered to be two observations.

Only publicly stated threats are observed. Such threats are defined here as a UNSC resolution that has been drafted or issued, or a P5 statement made by a P5 state’s government or foreign ministry to the media, which threatens the imposition of a UN arms embargo within the framework of the UNSC. The statements are located using the Reuters Newswires via Factiva (1 Jan. 1990–1 Oct. 2006) based on the following search terms: (security council) and (arms) and (threat or threats or threatened or propose or proposes or proposed or proposal or demand or demands or demanded) near (embargo or embargos or embargoe or embargoes or sanction or sanctions or sanctioning or measure or measures) not (iraq or iraqi or irak or kuwait or kuwaiti or kuwait or kuwaiti or kuwaiti or kuwaiti or kuwaiti or quwait). All articles relating to Iraq were removed from the primary search since the inclusion of Iraq in the searches would yield an unmanageable amount of articles. A separate search was instead made with a change in the search terms whereby “near” was replaced with “and”, and “not iraq.” was replaced with “not yugoslavia.”. Twenty-one cases of threatened UN arms embargoes in the period 1990–2006 were identified using this approach (see table 2.1).

The problem with not including threats that were made by the UNSC or an individual P5 state in a private context is that there is a risk of bias when making inferences. It is for instance possible that the threats which reach official status are the really difficult cases where tacit demands do not work, or perhaps some cases are made official due to media interest. However, including threats that were made via official documents as well as via media will however serve to get a wider number of threats than if only resolution documents would have been used. In any case, the possibility of sources of bias is acknowledged when discussing the uncertainty of the results.

### Specifying the Variables

The dependent variable, behaviour, is in the threat cases assessed based on whether the sender succeeded in positively influencing the behaviour of the target within a year following the observed threat. The sources used to determine the target’s response are the articles resulting

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7 [http://factiva.com/], last search using the specified search terms in November 2006
8 Other search-criteria set to “all”. Language: English, Swedish, Norwegian.
from the above mentioned search, the Uppsala Conflict Data Program’s database and data on one-sided deaths.\textsuperscript{10} If an arms embargo was imposed the threat is always considered a failure since it is assumed that the behaviour of the target was not improved enough to avoid imposing the measure.

A number of subjective and objective factors determine whether a threat of an embargo will succeed in affecting a target’s behaviour. Based on H1 the credibility of a threat is here seen as the main determinant of its success in improving behaviour. Although credibility should ideally be assessed by knowing how the target understands and judges the credibility of a threat, this is not a realistic approach given the resources and objectives of this research. Two empirically observable measures that took into account the centrality of the positions of P5 states with regard to arms embargoes were therefore used to determine the credibility of a threatened UN arms embargo:

- Whether the target is or is not a significant recipient of arms supplied by a P5 state
- Whether a UN arms embargo against the target was or was not opposed in public statements by any P5 state.

The first criterion was investigated using data arrived at by SIPRI in the arms flow case studies and the arms flow sections in the main report. Information from the UCDP database was also used for assessing this criterion.\textsuperscript{11} To identify public opposition by P5 states the information arrived at in the search for threats, detailed above, was used.

A credible threat might be associated with a positive behavioural change on the part of the target but a number of other, confounding, factors could also be the source behind why an embargo threat fails or succeeds. The influence of five other factors will therefore be considered when analysing the results. The first four are relevant for all cases the last is however not directly pertinent to the Global Security cases.

\textsuperscript{10} Uppsala University, Uppsala Conflict Data Program, Uppsala Conflict Database: http://www.pcr.uu.se/database/index.php; UCDP One-sided Data: <http://www.pcr.uu.se/research/UCDP/States_in_Armed_Conflict_Annual_Data_Eriksson1.htm>

\textsuperscript{11} Uppsala University, Uppsala Conflict Data Program, Uppsala Conflict Database http://www.pcr.uu.se/database/index.php; See the main report for references to the SIPRI material
• **Duration of the crisis.** The longer a crisis has been present, the more intractable the situation and the less likely it is that the threat will change target behaviour.\textsuperscript{12} Measured by calculating the mean of all observations and use that measure in order to arrive at a dichotomous variable. All values above the mean\textsuperscript{13} are coded as 1 and all equal or below to the figure are coded 0.

• **Other UN sanctions.** If other sanctions have already been imposed, or are imposed within a year of the threat, the chances for a threatened UN arms embargo to succeed are diminished. The reason being that a target facing threats, while at the same time exhibiting the ability to withstand other threats, suggests that the target is of a type that is hard to persuade.

• **UN peacekeeping.** If UN peacekeepers are present in a state containing threatened UN arms embargo targets, and their behaviour improves, it is highly likely that this presence has positively influenced target behaviour.\textsuperscript{14} The presence of UN peacekeepers was determined using the UN Department of Peacekeeping Operations online resource.\textsuperscript{15}

• **Leadership change.** When militant leaders of targets are removed from power, including by death, if they are replaced by more conciliatory leaders targets may undergo positive behavioural changes. In order to get a similar coverage off all cases the Keesing’s World News Archive\textsuperscript{16} was searched using the terms ‘leader’ and ‘leadership’. Only the cases of leadership change that were of a sudden nature were included. Sudden would for instance be deaths on the battlefield or through assassinations or accidents, or imprisonment or popular overthrows.

• **Victory.** A conclusive politico-military victory may result in an improved situation in the short term by forcibly removing targets or forcing them to negotiate and accede to the victor’s demands.\textsuperscript{17}

\textsuperscript{12} For conflict cases it can however also be claimed that longer duration of the conflict in which the target is involved increases the likelihood that there is a positive behavioural change. On average over all types of cases the expectation is however the opposite.

\textsuperscript{13} Mean duration of crisis for all observations is about four years.


Method
Bivariate correlations were assessed by using crosstabulations. Due to the few observations it is difficult to reach any conclusive results using further statistical methods so the issues were briefly assessed qualitatively, using some observations as examples. This also made it possible to discuss the possible causal relations between variables. The independent variables are lagged one year compared to the dependent in order to improve the possibility to trace the causality.

EMBARGO IMPLEMENTATION

Selection of Observations
The report assesses the impact of the 27 mandatory UN arms embargoes both on arms flows to the embargoed targets and on target behaviour. The cases are categorised according to their end goals of Global Security, Government Authority and Conflict Management. The observations analysed in the behaviour section are collected annually and consist of the total behaviour of all targeted actors within a country, per sanctions regime. The number of observations studied is 127. Total behaviour means that the behaviour of all targets that face a particular sanctions regime must be considered positive if the dependent variable is to be coded positive. If at least one target deviates the total behaviour is not considered positive unless the UNSC demands clearly exhibits a lower level of ambition. Explicitly using annual observations allows for a more dynamic comprehension of the impact of arms embargoes, particularly since the yearly effect of the sanctions can be compared to that of other sanctions and other important factors that change on a yearly basis. The limitation of the case selection is that no counterfactual cases are included, in other words no cases where sanctions were not imposed are analysed. The results does therefore not inform of what the causal difference is between imposing and not imposing sanctions. What the results do cover, as H2 indicates, is the difference between observations where sanctions are merely imposed and those where sanctions are better implemented. This means that new knowledge concerning the causality of arms embargoes can be acquired.

Specifying the Variables

See table 1.1 of the main report.
Target behaviour is traced in relation to the demands and end goals of embargo resolutions. Different sets of indicators were used for observing and assessing target behaviour. In the *Global Security* category, political statements and actions demonstrating compliance with UNSC demands were the main indicators. In the category *Government Authority*, political statements and the level of violence against civilians were analysed. In embargoes aimed at affecting the end-goal category *Conflict Management*, the implementation of peace agreements and the level of battle-related violence were the indicators.

In order to measure the independent variable *implementation* two indicators are used. The first concerns the UN’s own mechanisms for implementation:

- The establishment of specific UN arms embargo monitoring and enforcement mechanisms beyond sanctions committees. When such functions are in effect the level of *UN monitoring and enforcement* is considered to be high, otherwise low. Note that only the mechanisms that are directly controlled by the UN are counted here.

The second indicator seeks to approach the issue of capacity and will of neighbouring states to implement arms embargoes. The capacity of member states to implement arms embargos is crucial for inducing behaviour change since if they have no capacity, or if they have capacity but uses it for busting the embargo rather than boosting it, embargos will risk having little effect.

- The indicator *border-crossing restraint* aims to capture the influence of the capacity and will of states neighbouring the target. This measure represents the number of land borders to which embargo targets have access in each calendar year. Actors can have access to more borders if they are located in a large area or if they are fighting, have bases, or train in neighbouring states. It is assumed that the fewer the number of borders to which a target has access, the smaller its range of options for circumventing the UN arms embargo. The numerical measure is transformed into a dichotomous

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19 The ideal measurement of state capacity and will should contain information related to border guarding capabilities, bureaucratic capacities, as well as information on the policies of the states that are neighbours to a targeted area. Unfortunately, for most of the countries that are relevant when studying arms embargos the available data on such indicators is very sparse and barely present for half of the observations. It is also probable that information is systematically lacking in the states with the lowest capacity, giving much skewed results. The proxy chosen is therefore a working compromise as it captures some aspects of will for all observations.

20 This measurement can be exemplified using Liberia: The state shares borders with three neighbours but during 2003 the rebels LURD (Liberians United for Reconciliation and Democracy) had access to Guinean territory and MODEL (Movement for Democracy in Liberia) had command posts in Ivory Coast. This means that in total nine borders were available to targeted actors during that year, therefore decreasing the total level of capacity used by neighbours to implement embargos. If the Liberian government would have been the only target during the year the number of borders would have been three. Using this measure therefore allows for different estimations of the neighbours implementation capacity depending on whether the sanctions regimes are blanket or selective.
measure by calculating the mean number of borders of all observations.\textsuperscript{21} All cases where the targets have access to more than the mean number of borders are coded 0 (low border-crossing restraint) and all cases with less than or equal to the mean are coded 1 (high border-crossing restraint).

Other factors that can influence a target’s behaviour, either in connection with or in the absence of a UN arms embargo, include the five factors presented in the previous section on threatened UN arms embargoes threats (duration of the crisis\textsuperscript{22}, other UN sanctions, UN peacekeeping, leadership change and victory) as well as a sixth factor—embargo duration.

The \textit{embargo duration} factor suggests two hypotheses. First, if an arms embargo coerces the target to change its behaviour, this will occur very soon after the embargo is introduced.\textsuperscript{23} Second, long-standing UN arms embargoes are more likely to be circumvented following the emergence of new supply routes or the establishment of domestic arms production facilities.\textsuperscript{24}

The embargo duration measure is transformed into a dichotomous variable using the same technique that has been used for other variables specified previously: the mean\textsuperscript{25} is calculated and used as a reference point to create two categories.

In the threat section it was posited that if \textit{other sanctions} have already been imposed the chances for an arms embargo to succeed are diminished. When considering other UN sanctions during the period of an embargo, the opposite would be expected: the greater the range of sanctions imposed, the greater the likelihood that target behaviour will improve in line with UNSC demands.\textsuperscript{26}

\textbf{Method}

\textsuperscript{21} Separate means were calculated for the sample including all observations and the sample that only includes the Government Authority and Conflict Management observations.

\textsuperscript{22} Mean duration of crisis for all observations is about nine years.


\textsuperscript{24} Note that it can also be argued that duration might have the opposite effect since implementation may be improved over a period of time. That fact will however be approached using the UN monitoring and enforcement measure.

\textsuperscript{25} Mean embargo duration for all observations is about four years.

Crosstabulations were used in order to establish the presence of bivariate correlations.\textsuperscript{27} The number of observations is large enough to arrive at some conclusions concerning correlations. Note however that no multivariate statistical techniques were used due to the small variation in terms of sanction regimes. Therefore the data was also presented and analysed in a qualitative way in order to illustrate potential correlations between variables and in order to discuss the causal relations. Only the results that are of immediate interest to the research question are included in the main report. As in the threat chapter the independent variables are lagged one year in relation to the dependent.

ENDING EMBARGOS

Selection of observations, Specifying the variables and the Method

In regards to the observations of ended embargoes a distinction needs to be made between the two procedures that have been used when ending UN arms embargoes: Lifting in a UNSC resolution; and lapsing of a time-limited embargo by expiration.\textsuperscript{28} 

The objective of the analysis of embargo endings is to describe the dependent variable it in relation to the decision to end the sanctions. The target behaviour is considered improved if it is so during the year that the embargo is lifted and during the subsequent year. This makes it possible to reverse the causal direction and discuss whether the UNSC kept the measure until it was certain that the improved behaviour could continue past the short term (H3). The assumptions about causality concerning conditional independence (that values are assigned to independent variables unrelated to the values taken by the dependent variable) is therefore relaxed during this more exploratory part of the report.\textsuperscript{29}

Just as in the threat phase there are not enough observations to reach any conclusive results using cross-tabulations. The results and the data that exist are therefore further evaluated and discussed by comparing the cases.

\textsuperscript{27} The results of the crosstabulations are presented in the text and in figure 3.1 instead of including all tables in the report. 
\textsuperscript{28} See table 4.1 in the main report