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News coverage and Japanese foreign disaster aid: a comparative example of bureaucratic responsiveness to the news media

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Abstract

This paper examines news coverage of overseas natural disasters in Japan and the United States and assesses the extent to which that coverage affects amounts and types of emergency assistance provided by each country's ODA program. The comparison between the two cases allows for the examination of the different effects of media on foreign policy as well as the different ways in which those effects are filtered through institutional arrangements within the aid policy-making apparatus in each country. Following up comparative work on media impact on development aid programs in five countries, this paper argues that the organization of emergency assistance programs is a key determinant in explaining media impact on aid policy.

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1 Introduction

The disaster assistance bidding war that followed 2004 Indian Ocean Tsunami and other recent events has brought questions regarding the role of the news media in international disaster assistance to the forefront of many debates. As the international response to the tsunami gained momentum and seemed to take on a life of its own, the only real difference between that disaster and many others occurring at or near the same time seemed to be the news coverage. The videos, pictures, and first-hand accounts sent home by the army of technologically armed tourists connected the event to just about every community in the world, amplifying its presence in the media and driving governments from New Zealand to Norway to respond with the biggest disaster aid response in the history of almost every country that offered assistance.

While the tsunami may have focused public, political, and academic debates on the role of the news media, there is nothing new about the issue. Before the tsunami, before 9-11, before Somalia kicked off the study of the CNN effect, even before the rock concerts drove the response to the Sahel drought in the mid-1980s, policy officials and analysts concluded that there was a need to study the media's role in the social and political response to disasters (Quarantelli, 1980). In addition to studies of the CNN effect, how disaster-response officials and media representatives interact during disasters (Sood *et al.*, 1987) and how the public responds to coverage of hazards and disasters (Burkhart, 1991) have been investigated. Despite events that have repeatedly refocused attention on the news media's role, however, the last quarter of a century has seen remarkably little rigorous empirical study of the influence of the news media on international disaster relief agencies. What research has been done has focused exclusively on the United States.

This study examines the relationship between media coverage of natural disasters and official disaster assistance of Japan during the period 1985–98, expanding both the total number of analyses available and providing the first point of comparison to the US case. Using an extended version of Olson and Drury's data set on disasters (Olson and Drury, 1997), this study provides as direct of a comparison as possible to existing studies of the news media's role in the US foreign disaster assistance (Van Belle, 1999; Van Belle *et al.*, 2004; Drury *et al.*, 2005). Japanese news media coverage is coded using the same rules and on the

same scale as the US case. The analysis replicates the methodology used in the latest study of the United States, and many of the same control variables are used.

2 Media and disaster assistance

Studies of media impact on official disaster assistance in the US case have ranged from the possible effect of the racial characteristics of the stricken country (Van Belle, 1999) to the influence of domestic and international political forces (Drury *et al.*, 2005). Analyses of the distribution of this assistance have repeatedly shown that the level of news media coverage in the domestic press is the most consistent and most substantial influence upon the aid offered. Regardless of the combination of independent and control variables employed, media coverage influences both which disasters receive assistance and how much assistance is offered, and the magnitude of the effect is substantial. Roughly speaking, for every *New York Times* article, the disaster-stricken country received an increase of US$600,000 in US disaster assistance compared with an increase of roughly US$400 per person killed (Drury *et al.*, 2005, p. 465).

This finding is in some ways consistent with the general conclusions derived from the study of what has become known as the CNN effect (Livingston and Eachus, 1995; Jakobsen, 1996, 2000; Natsios, 1996; Strobel, 1997; Robinson, 2002). The CNN effect argument, however, is problematic when applied to the study of media impact on disaster assistance. While many scholars refer to any instance where the news media influences foreign policy as part of the CNN effect, the term specifically refers to the media's influence on Western involvement in complex humanitarian emergencies, which are both similar to and distinct from the natural disasters studied here. Complex humanitarian emergencies include a security and conflict element as a significant if not primary cause of the human impact of the event, and that security aspect means that international responses must typically combine emergency assistance, development aid, and military intervention. While the initial claim and the first few case studies of the CNN effect seemed to indicate that the media was playing a new and significant, perhaps even overwhelming, role in the response to these events, subsequent analyses have steadily drawn the academic consensus toward the more conservative counter claim that the media's influence is primarily on overcoming

domestic political obstacles and applying pressure on the timing of intervention (Jakobsen, 2000). Robinson (2002), moreover, argues that the CNN effect applies only when certain domestic policy conditions apply in the donor government. Most importantly, the studies seem to show that traditional security concerns seem to remain the predominant factor in the decision making. Media coverage cannot overwhelm capability and other strategic considerations.

The CNN effect literature's focus on the domestic political arena as the primary location of media influence informs the theoretical underpinnings of the study of the news media's role in the response to natural disasters. The security element of complex humanitarian emergencies, however, makes it impossible to equate these two categories of events and their corresponding policy responses. The security element in complex humanitarian emergencies means that aid decisions always engage the elected officials at the highest levels of government. Response to natural disasters, on the other hand, is a predominantly bureaucratic process which is almost certain to work from a different underlying logic. As demonstrated by the bungled response to hurricane Katrina's devastation of New Orleans, even in major domestic disasters, bureaucratic predominance in the process is expected and elected officials must choose to engage (or fail to engage) the disaster-response process.

The parallels between disaster assistance and development assistance may seem obvious, with the responsibility for official foreign disaster response usually located within development aid agencies, but for the analysis of disaster aid, comparison with development assistance is misleading. The substantial foreign development assistance literature informed the analysis of political influences on disaster aid (Drury *et al.*, 2005) and it also defines part of the analytical methodologically. The two-stage analysis, with the selection of recipients partially separated from the levels of aid, is similar for both. However, development assistance is a recurring, periodic decision-making process, while disaster assistance is event-driven. Not only is the decision-making logic different for reoccurring choices versus responses to events, development assistance requires cross-sectional time series techniques to take into account the degree to which any one aid decision is dependent upon changes from a base defined by previous choices. In contrast, the response to the random and independent occurrences of natural disasters can be studied with simple cross-sectional regression techniques.

3 Bureaucratic incentives and media signaling

Despite the popularity of the CNN effect argument, this article argues that the logic of bureaucratic responsiveness to the news media better explains the relationship under study here. The details of this conceptualization of foreign aid bureaucracies are offered in previous research (Van Belle and Hook, 2000; Van Belle *et al.*, 2004) but the general argument is summarized here. On the basis of a principal-agent model of bureaucracy, the media is argued to provide a common referent that both the elected officials as principals and the bureaucracies acting as the agents used to gauge domestic political demand for action. Legislative oversight is almost entirely negative and sporadic, consisting primarily of budgetary threats and career sanctions that can be levied against bureaucratic agencies or their top officials. Elected officials only engage in the costly and difficult task of bureaucratic oversight when they believe they have good reason to, such as when the news media alerts everyone to a failing of the bureaucracy in question. Further, because of the costs involved for elected officials, once those oversight mechanisms are engaged, it is unlikely that a bureaucracy or its directors will escape unscathed. The only safe option for the bureaucracy and the bureaucrat is to pre-emptively avoid oversight altogether.

Getting caught out of step with domestic political demands is a sure way for a bureaucracy to gain unwanted media attention and find itself facing elected officials pulling the 'big stick' out from behind the door (Moe, 1982). In order to avoid being seen as too far out of step with public demand, bureaucracies use media coverage as an indicator of how to adjust their procedures or even specific actions. Aid policy bureaucrats also use the media as a surrogate for public opinion. This explains how bureaucracies that are rarely the focus of direct oversight adapt to changing political conditions. In fact, an absence of oversight actions can be used as an indicator of which bureaucracies monitor and adjust to demands the best. It also explains why aid bureaucracies would respond to the news media. More coverage indicates a higher domestic political demand for action, and for the aid bureaucracies, this serves as an indicator that they should give more aid to those countries or events in order to stay in step with what they believe is the public's demand. While much of the aid decision is based on concrete factors such as need, disaster aid bureaucracies want to avoid both under-responding to events that

the public will care about as well as over-responding to events that the public knows nothing about.

An alternative argument could be made that donors are motivated by budgetary considerations. Budgets must be spent, so disaster aid is doled out accordingly. In both cases considered in this article, however, disaster aid budgets are not fixed. For the United States, the OFDA allocates according funds on the basis of the occurrence of disaster (see what follows). In the Japanese case, all disaster aid decisions are vetted by the Ministry of Finance (Wada, 1998). In effect, the foreign minister must go begging every time his ministry wishes to respond to a plea for assistance. The small size of disaster aid budgets and the lack of incentives to spend what is in effect not an annual budget, however, would seem to mitigate many of the effects of standard bureaucratic politics.

4 Studying foreign disaster assistance

The lack of an extensive body of empirical research into foreign disaster assistance is striking, particularly for the US case. The responsible US agency, the Office of Foreign Disaster Assistance (OFDA) has a history that goes back to 1965 and its accounts have always been part of the public record. However, despite the large body of research focused on US development assistance, not to mention the way the Sahel drought focused attention on disaster relief, a database from those records was not compiled until the mid-1990s. Perhaps even more telling, the initial analysis from that data focused not on the aid allocation, but on the effects the assistance had upon the post-disaster stability of the stricken country (Olson and Drury, 1997). It was only the coincidence of an unrelated discussion at an academic conference that led to the first analysis of the allocation of that aid (Van Belle, 1999).

The lack of literature on Japan's disaster aid is equally striking. There is one book on the subject written by a Japanese foreign ministry official (Wada, 1998), published evaluations of the program, and one book that examines a single instance of an NHK documentary about Japanese aid in the wake of the 1998 earthquake in Turkey (Kusano, 2000). No other work on the subject appears to exist either in English or in Japanese. Even though natural and political disasters calling for an organized international humanitarian response are on the rise, and allocations for humanitarian assistance are constantly increasing, there still has been

little empirical study of how nations allocate this aid. Partly, this is a matter of information availability; most countries do not make clear budgetary or recordkeeping distinctions between emergency disaster responses and development assistance. Even so, it is difficult to explain the lack of attention to a set of phenomena that are ideal for empirical analyses. A major contribution of the current research may well be to begin a scholarly discussion assessing the strengths and weaknesses of different countries' emergency assistance.

Three aspects of foreign disaster aid make it an ideal subject for study, particularly in comparison with the much more heavily analyzed area of development aid. First, disaster assistance is largely isolated from most complicating factors. In both the United States and Japan, the relevant decision-making process is almost purely bureaucratic, with little evidence of the legislative, executive, or other intervening domestic political forces that complicate the analysis of foreign development assistance. Focusing on disaster aid makes it possible to examine the actions of a particular bureaucracy independent of the whims of elected officials, the dynamics of electoral politics, or cross-cutting pressures of multiple bureaucratic agencies.

Second, disaster aid is uni-dimensional. Most development aid decisions are multi-faceted, involving considerations of recipient country's economic and social development potential; political and diplomatic impact; geo-strategy; and donor state's economic benefit. With disaster aid, however, there are no such complex considerations. There is no trade-off between jobs or trade, guns, or butter. There is no complex array of policy choices or strategies to consider. The bureaucracy's output is almost entirely limited to more aid or less aid. Public opinion should be uni-dimensional as well, demanding more or less aid rather than choices among multiple options. The basic policy choice, then, is to provide assistance or not, more or less.

Third, disaster aid is event-based. Decisions to provide assistance follow specific, randomly occurring natural events and can therefore be treated as one-shot policy actions. In contrast, development aid tends to be an iterated game in which current decisions are influenced by previous ones (Potter, 1996). Furthermore, development aid budgets can fluctuate widely from year to year, complicating statistical analysis of external causes of bureaucratic behaviors. Budgeting for disaster assistance, in contrast, tends to be far more *ad hoc*. In fact, for the US case, it is almost entirely *ad hoc*.

OFDA has no set budget for aid and instead offers aid within a set of guidelines without regard to expenditures on other disasters, with all budgeting and oversight situated in *post hoc* reviews.

Previous studies of news media's influence on development aid give ample reason to expect that media will influence Japanese foreign disaster assistance in a manner similar to the United States. Comparative work on five donor countries found that the news media consistently, robustly, and substantially influences development assistance allocations to recipient countries. The research found the media variable to be positive in all cases with the substantive significance of the media's influence as the only factor that varied. Media coverage of recipient countries in the United States and UK was strongly associated with the geographic distribution of aid commitments, fairly strongly associated in the cases of France and Canada, and positive but problematic in the Japanese case (Potter and Van Belle, 2004; Van Belle *et al.*, 2004; Rioux and Van Belle, 2005). Across those cases, the only independent variable that showed anywhere near the same consistency was per capita GNP of the recipient which was used as a measure of overall wealth/poverty.

The Japanese case was especially interesting because the institutional structure of the aid program seemed to be a complicating factor. When media impact was measured separately against Japanese loan aid and grant aid, the media was observed to have a significant influence on the latter but not on the former. Each of these types of aid is subject to different policy-making procedures with different sets of decision-takers. In particular, grant aid policy (including country allocations) is largely set by the Ministry of Foreign Affairs; loan aid is decided jointly by a three-ministry consultation process (four until 2001). The latter is characterized by relatively long decision time and lack of transparency in decision-taking. The complexity or simplicity of bureaucratic organization seems to be a key intervening variable in the influence of the news media (Potter and Van Belle, 2004).

5 Organization of Japan's disaster assistance program

Disaster assistance in Japan is not organized independently of the rest of the aid program. As a result, components are spread across agencies of the national government. Emergency assistance *per se*, which includes aid

following natural disasters and civil conflict, is one part of the grant program. As such, it is under the control of the Ministry of Foreign Affairs and administered by the Japan International Cooperation Agency (JICA). In 1987, the Diet legislated the creation of the Japan Disaster Relief Team program charged with the dispatch of experts upon request by affected countries. This program is administered by the Overseas Disaster Assistance Division of the Economic Cooperation Bureau of MOFA and Disaster Assistance Division of the JDR Secretariat of JICA, in cooperation with the relevant divisions of ministries and agencies that provide personnel (Ministry of Foreign Affairs of Japan Third Party Evaluation, 2004). Since the 1995 Hanshin-Awaji Earthquake, the loan aid program has stepped up yen loans for long-term disaster reconstruction and disaster prevention and preparedness. In budgetary terms, this aid comprises the largest part of the disaster assistance program. In 2003, for example, this assistance accounted for 45 percent of all aid allocated under the rubric of disaster assistance (Nihon Seifu, 2005, p. 5). Loan aid is jointly decided by the Ministry of Foreign Affairs, the Ministry of Finance, and the Ministry for Economy, Trade, and Industry (METI, formerly MITI). Until 2001, the now-defunct Economic Planning Agency also participated in yen loan decisions. As a result, the administration of assistance variously classified as disaster aid reflects long-standing decentralization of the aid program. Significantly, no emergency aid budget line appears in aid annual reports. The emergency aid budget in any given year is the sum of various separate programs.

A key feature of Japan's aid program has been the request principle. Officially, the Japanese government will not consider an aid project until the prospective recipient government makes a formal request for assistance, although this stance has been relaxed somewhat in recent years. The request principle is part of the emergency aid program as well; the foreign ministry is at some pains to justify its position in light of international humanitarian law (Wada 1998, p. 285). This potentially complicates the analysis here because not all natural disasters will elicit requests. Governments may rely on domestic resources to respond to emergencies. Moreover, the request principle may lead to lags between the onset of emergencies, and corresponding news coverage, and actual requests to the Japanese government. This is likely to be the case for countries making requests to Japan for the first time. Prior research suggests that there is a learning curve that faces developing countries when they engage a donor's aid program for the first few rounds because

lack of knowledge may lead to requests for inappropriate aid or through the wrong channels (Potter, 1996).

The need to expedite procedures, however, is especially crucial in the case of emergency assistance, and in practice, the embassies in affected countries are tasked with providing host governments with timely information on Japan's emergency aid program, but the aid bureaucracy has not systematically resolved the challenge posed by a reactive decision-making process. Not surprisingly, in the wake of major natural disasters (including Japan's own Hanshin-Awaji Earthquake), Diet members have taken the opportunity to point out the problem (Wada, 1998, pp. 51–60, 102).

6 Data and variables

The research tests for correlation between the volume of media coverage of an overseas natural disaster and Japan's emergency assistance for that disaster. Data were collected for the years 1985–98. As far as the authors have been able to determine, complete and publicly available data on individual emergency aid allocations before 1985 do not exist, making it difficult to collect complete data from before that time.

The dependent variable is the amount of emergency assistance in cash or in kind committed by the Japanese government for each event. Disaster aid commitments were calculated on the basis of exchanges of notes reported monthly in the *Kokusai Kaihatsu Janaru's* 'Data Box' (1985–1998). Where possible, these data were cross-referenced with emergency aid data for each recipient country reported in the foreign ministry's annual report on ODA, *Waga Kuni no Seifu Kaihatsu Enjo* (Gaimusho, selected years). It must be stressed here that the data are not necessarily congruent between the two sources. When in doubt, the monthly Data Box figures were used because they are more accurate reports of specific aid commitments for specific events. Moreover, they include commitments of aid in kind for specific events, which are not included in the country's data in publicly available foreign ministry documents.

Emergency assistance has several components: natural disaster assistance, assistance for refugees and displaced persons in civil conflicts, and assistance for epidemics. The data used in this study cover only natural disaster assistance. This simplifies somewhat the difficulties of institutional decentralization discussed earlier because final authority in deciding to provide aid rests with the minister of foreign affairs (Wada,

1998, p. 61). It should be noted that in a few cases, the Japanese government reports assistance for natural disasters that do not appear in the list of natural disasters used in this study, and such cases were discarded. In a few other cases, the exchange of notes data (possibly follow-up commitments) could not be attributed to specific disaster events and were also discarded from the data set.

The primary independent variable is Japanese news coverage about those natural disasters reported in the database used for the US analysis (discussed in what follows). Japanese news coverage was measured in terms of the number of articles about each event published in the *Asahi Shimbun*. The *Asahi* is a suitable choice for three reasons. First, print media coverage of natural disasters is likely to be more comprehensive than that of television news simply because of time constraints imposed on the latter (for a discussion of print versus television news media and politics in Japan, see Krauss, 2000). Second, policy-makers view the *Asahi* as the best source of print news about foreign events (Feldman, 1993), which suggests the possibility of a link between coverage and official action. Third, the *Asahi* is considered to be left-of-center politically; this is unlikely to affect its coverage of natural disasters. Research on *Asahi* coverage of the Association of Southeast Asian Nations (ASEAN) (Sudo, 2001) and of foreign aid suggests that it tends to provide a good match between coverage and major events, and that the volume of its coverage does not vary markedly from other newspapers (Kusano, 1993, 1999; Kusano and Okamoto, 2005). The authors are satisfied therefore that the measure serves its purpose.

To test the *Asahi*'s representativeness, coverage of natural disasters from three other national dailies during May, June, and July 1995 were compared with the *Asahi*. This period is interesting because it includes a number of what might be termed 'usual' disasters (e.g. inclement weather caused by the annual monsoon cycle in East and South Asia or the onset of the hurricane season in the Caribbean region) and two singular events (a massive earthquake in Sakhalin, Russia, and the collapse of a large department store in Seoul, South Korea, both of which inflicted major damage). Of three vernacular papers, the *Asahi*, the *Mainichi Shimbun*, and the *Nihon Keizai Shimbun*, the *Asahi* carried not only more articles but covered more disasters. The *Mainichi* followed with somewhat less coverage and slightly fewer articles. In rare instances, the *Mainichi* reported natural disasters when the *Asahi* did not, but for the

most part, coverage overlapped: in no cases did one paper devote intensive coverage to a natural disaster when the other did not. The *Nikkei* covered only major disasters and carried fewer articles than the *Asahi* and the *Mainichi* when it did. The only other paper that competed with the *Asahi* for both article number and breadth of coverage was the *Japan Times*, an English language daily. It is hard to imagine it, however, as the paper of record for Japanese government officials.

The question of newspaper coverage versus television coverage presents a greater problem for the researcher. A comparison of *Asahi* coverage with NHK coverage would provide valuable insights into the impact of news media on disaster assistance policy, but compiling video-based data for the kind of time series analysis conducted here would be nearly impossible. The reader may consult Krauss (2003, pp. 184–190) for confirmation. Three points suggest that the broadcast media is less likely to interfere with the hypothesized impact of newspaper coverage than might be imagined. First, given the constraints of time allocations for news broadcasts, an issue for the commercial broadcasters as well as for NHK, it is difficult to imagine news programs devoting time to any but the largest disasters. As seen above in the spot comparison of newspaper coverage, a key feature of print coverage is not only the frequency of reporting of specific disasters but also the breadth of coverage. The print media is likely to cover more disasters, especially smaller disasters, than broadcast media. Second, broadcast media suffers from time constraints that print media does not. A newscast is broadcast at a specific time and then it disappears whether viewed or not. A newspaper article is available for perusal by a policy-maker at the policy-maker's convenience, and therefore stands a better chance of being consumed. Third, poll data suggest that the Japanese public relies heavily on both television and newspapers for international news, consuming both at high rates (Naikakufu Daijin Kanbou Seifu Kouhou-shitsu, 2004, pp. 58–59). These points are also indirectly supported by the analysis of the US case, which indicated that print and broadcast news coverage levels and the influence of those coverage levels moved in parallel with print sources serving as a better indicator because they were the more sensitive and comprehensive of the two media (Van Belle, 2003).

The natural disaster data set used in this analysis is an update of the original Olson and Drury's data set (Olson and Drury, 1997). The original was derived from US government sources, namely the records of the OFDA, and the update was compiled from the Centre for Research on

the Epidemiology of Disasters, which took over much of the non-budgetary record keeping from the OFDA in 1995. The data include all types of natural disasters: volcanoes, earthquakes, floods, storms, typhoons, hurricanes, avalanches, and droughts. The database is separate from that used by the Japanese government to record assistance, which ensures that there is no bias in the correlations between media coverage, event data, and allocations.

Several independent variables included in the disaster data set are used as control variables in the analysis of the effect of news media coverage. The magnitude of each event was measured by (i) the number of people killed, (ii) the number of people rendered homeless as a direct result of the disaster; and (iii) the number of people affected as a direct result of the event. Also, to control for the way different types of events unfold and how they might demand different kinds of responses, independent variables indicating the type of disaster were included in the analysis.[1]

A second set of independent variables representing standard measures in the analysis of foreign aid were included. Per capita GDP and population are used to control for the effect of the size and wealth of the stricken country. To control for the possible effects of economic relations with Japan, both imports from and exports to the stricken country are included in the analysis.[2] Finally, to control for the nature of the political system, a regime variable is generated by subtracting the Polity IV Autocracy measure from the democracy measure.[3] The distance from Tokyo to the disaster-stricken nation's capital is included as a measure of proximity. The percentages of the country's population that are Christian and Muslim is also included.[4]

The authors wondered whether the creation of the Japan Disaster Team system in 1987 would reveal a change in media coverage of disasters. Dispatches from September 1987 to December 1997 were coded using a dummy variable (1 if a team was dispatched to a disaster site, 0 in all other cases; no separate coding was done for multiple dispatches to the

1 The disaster data are available from http://www.cred.be/.

2 As compiled by Gleditsch (2002).

3 Data are available at http://www.cidcm.umd.edu/inscr/polity/.

4 The CIA World Fact Book was used to compile these data, http://www.cia.gov/cia/publications/factbook/. As noted in the discussion of the Analysis, these data were quite literally used by accident.

same disaster). Up to the end of January 2004, 9 rescue teams, 27 medical teams, and 21 expert teams had been dispatched, producing a total of 57. This number was judged to be too small to use for statistical analysis. Eyeball survey suggests that the dispatch of disaster team would enhance the significance of the media variable because disaster teams tend to be dispatched to events that receive the *Asahi* coverage. Of 20 coded cases between 1987 and 1997, 15 were for events that received media coverage.

7 Analysis

Because of the likely inter-relationship between the factors that influence the selection of aid recipients and those that influence the amount of aid given, the most appropriate method for analyzing allocations of disaster assistance is a two-stage Heckman model (Drury *et al.*, 2005). However, because of the nature of the Japanese disaster aid data, the Heckman model was problematic. Except for a few disasters that received very large sums, most of the disasters that received aid received roughly the same, almost standardized amount of assistance. This highly non-stochastic distribution, combined with the limited number of instances where Japan offered aid during this period (167), made it impossible to produce reliable regression results for any analysis of the levels of aid offered. The Heckman model presumes that there is a reliable and well-specified underlying regression equation for the second (levels of aid) stage that needs to be refined through a separate consideration of the first (selection of recipients) stage. Thus, its application was problematic[5] and the two stages of the aid allocation process had to be analyzed separately.

For the second stage, an ordinary least squares linear regression was applied to the pool of aid recipients to examine variations in how much aid was offered. There was no need for a table to report these findings; largely because of the lack of variation noted, nothing was statistically significant, and we focus our discussion on the selection of recipients. For the first stage, standard, logistic regression techniques are used to analyze influences on who does and does not receive aid. The results for the full model are reported in the table below, with the statistically

5 It should be noted, however, that when the Heckman model was applied to this study, the media coverage variable was the one and only statistically significant variable.

significant variables highlighted in bold. Refinement of the model by removing the clearly insignificant variables did not alter the results for the significant or near-significant variables.

Recipients of Japanese disaster aid

Logistic regression				
Number of observations	1577			
LR $\chi^2(18)$	183.53			
Probability $>\chi^2$	0.0000			
Pseudo-R^2	0.1803			
Log-likelihood	−417.14658			
	Coefficient	Standard error	z	$P>\|z\|$
Coverage	0.1007567	0.0230291	4.38	0.000
Human impact of disaster				
Killed	1.65e − 06	0.0000105	0.16	0.875
Homeless	4.26e − 07	1.69e − 07	2.52	0.012
Country characteristics				
Exports to	−0.0000263	0.0000315	−0.83	0.404
Imports from	0.0000336	0.0000344	0.97	0.330
Population	−1.81e − 06	5.70e − 07	−3.18	0.001
Per capita GDP	−0.0001765	0.0000392	−4.50	0.000
% Christian	0.0014578	0.0042376	0.34	0.731
% Muslim	−0.0121008	0.0043333	−2.79	0.005
Regime type	0.0013257	0.0172149	0.08	0.939
Government stability	0.0003441	0.0061934	0.06	0.956
Distance	−0.0000143	0.0000268	−0.53	0.595
Disaster type				
Landslide	1.227757	0.6905771	1.78	0.075
Storm	2.361386	0.499672	4.73	0.000
Drought	1.212423	0.6252903	1.94	0.053
Flood	2.430524	0.4736288	5.13	0.000
Volcano	2.453008	0.697579	3.52	0.000
Earthquake	2.769489	0.5108046	5.42	0.000
Constant	−3.056729	0.5872999	−5.20	0.000

The significance of the media coverage variable is not only most important for the comparison with the US analysis, it also represents the most robust and the most substantively significant variable in the Japanese case. No matter how the regression model is specified, media coverage is always a significant factor in the selection of recipients, and in terms of the pseudo-R^2, it accounts for more of the variation than any other single variable in the model.[6] On the basis of the findings from the US case, this was not surprising. In the US case, the news media strongly influenced both the selection of recipients and the levels of aid.

At first glance, the insignificance of the number of people killed as an indicator of disaster severity appears surprising. The initial analysis of disaster aid (Van Belle, 1999) identified the number of people killed as the only variable that came close to the robustness and substantive significance of the media variable. However, that first study was limited to the levels of aid, the second stage of the two-stage analysis, and in more recent analyses, it has been shown that its influence on levels of aid is not matched with a corresponding influence on the selection of recipients (Drury *et al.*, 2005). In fact, the results for the two variables measuring the human impact of the disaster match those found in the selection stage of the US case. Similarly, the variables used to measure the economic capabilities of the affected country, specifically its population and per capita GDP, have a negative influence on its selection as an aid recipient and this is consistent with the results found for the United States.

From there, however, this analysis diverges from the US case. For the United States, the nature of the regime is a significant factor, with more democratic regimes more likely to receive assistance. For Japan, this is not the case. Regime type is nowhere near significant, nor does the duration of the country's current political structure, used as a measure of long-term government stability, have any influence on allocations.

Japanese economic interests are often claimed to be important factors in its aid programs. Recent analyses find such correlations in the development aid program, so imports from and exports to the stricken country are included in the analysis. These are not statistically significant,

6 The authors recognize the problems by trying to ascertain substantive significance of a variable by moving it in and out of regression specifications and comparing the resulting pseudo-R^2. This comment should be considered in terms of those difficulties and taken as nothing more than suggestive.

however, suggesting important differences between disaster and development assistance.

Disaster type is significant in the cases of storms (including typhoons, hurricanes, and cyclones), floods, volcanoes, and earthquakes. This might be attributed to the fact that as typically 'Asia-Pacific' events, these are most likely to prompt a Japanese response. The geographic bias of Japan's development aid toward Asia is well-known. Note, however, that the distance variable is insignificant and in the wrong direction. Rather, a quick review of the disaster databases used reveals that these types of events are common and geographically widespread (tropical storms, for example, occur frequently in both hemispheres), so Japan appears to have responded to disasters on the basis of their occurrence rather than on other criteria.

Drought as a type of disaster is positively correlated with disaster aid but not significantly so. Data seem to explain this result. The research uncovered both media coverage of these events and Japanese assistance for victims of drought. Unlike other natural disasters, however, drought onset is difficult to determine and therefore presents the problem of how to connect media coverage and aid with specific events catalogued by year. This is clear in the case of East African droughts in the 1980s. Moreover, *Asahi* coverage of East African drought tended to be presented as part of complex humanitarian emergencies. Stories covering drought events tended to emphasize the civil conflicts that accompanied them and so were discarded from the data set. Similarly, beginning in the mid-1990s, Japan began to allocate part of its emergency aid for victims of civil conflicts, including refugees. The civil conflict component of this aid led us to eliminate that aid from the data set. It is possible, therefore, that a less restrictive coding protocol would increase the weight of drought events within Japan's disaster assistance program and in *Asahi* coverage of disaster.

The surprising finding is that the percentage of a country's population that is Muslim is negatively correlated with the likelihood of receiving Japanese disaster aid. We had no reason to expect this and have no explanation for it. In fact, these data were quite literally included by accident. They were put into the disasters database in preparation for an analysis of the US case, and an error when selecting dependent variables for one of the many analyses resulted in the accidental inclusion of the Muslim variable and the first indication of this unexpected finding.

We do not believe it is actually religion that matters. There is no part of process, policy, or culture related to Japan, Japanese aid, or disaster aid in general that would indicate why this should be the case. It may also be that certain governments have refrained from requesting Japanese disaster aid for reasons unrelated to religious composition of the domestic population. Working inductively from this conclusion suggests no obvious explanations, however, so we leave it unresolved and open to future study.

8 Conclusion

Two main conclusions can be drawn from this study.[7] First, media impact on Japanese foreign aid matters systematically. The results reported here reinforce the findings of our previous study of Japan's overall aid program in two ways. It shows a significant media impact on disaster aid, contrary to studies that tend to ignore it or relegate it to special cases. It also reinforces prior research that demonstrates that, at least in the Japanese case, media impact will be significant when there is less institutional clutter in the aid program. In the previous research, media impact was insignificant in relation to the loan aid program, which is subject to multiple bureaucratic jurisdictions and pressures and which involves a decision-making process that can span years. Grant aid, on the other hand, is controlled by the Ministry of Foreign Affairs and involves shorter decision-making time. Media impact was shown to be significant there (Potter and Van Belle, 2004; Van Belle *et al.*, 2004). Disaster assistance is a subset of the grant aid program, and media impact turns out to be significant as predicted.

Second, the research speaks to an enduring debate about the purposes of Japanese foreign aid. The literature on Japan's foreign aid notes that the program contains both humanitarian and mercantilist motives (Schraeder *et al.*, 1998; Hook and Zhang, 1999; Tuman and Ayoub, 2004;

7 We should note here that even though we draw conclusions and discuss the following points in terms of the causal argument offered for bureaucratic responsiveness to the news media, the correlations identified in statistical analyses do not prove causation. What the correlations show is that there is a pattern in the data that is consistent with what we would expect to see if the causal argument is true. This greatly increases the likelihood that the causal argument is correct and it enhances our confidence in the causal argument tremendously, but at such an early stage in the study of Japanese disaster assistance it is important to keep in mind that this falls short of proof.

Tuman and Strand, 2006). This ambivalence is rooted in competing institutional centers in the aid program, each promoting its own vision of aid supported by separate coalitions of state and non-state actors (Saito, 1996; Katada, 2002). The Ministry of Foreign Affairs is the locus of the humanitarian aid axis, and disaster assistance should reflect that purpose. The research here suggests that it does. The lack of significance of the trade variables is especially suggestive in this regard, especially as it contradicts the findings of Schraeder *et al.* (1998). It is therefore correct to call disaster assistance the most purely humanitarian component of the aid program, a purpose that the news media reinforces.

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