Government restrictions on relief supply chains

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Abstract
Response to catastrophic disasters often requires external assistance from international relief organizations. Literature and empirical evidence show that governments do not always welcome this assistance. Based on a multiple case study conducted among four relief organizations, we identify governmental restrictions imposed on humanitarian relief supply chains in different countries. We analyze the dependency between government characteristic and the level of restrictions. We find that the more fragile a government is, the more restrictions it imposes on relief organizations. This knowledge helps relief organizations to prepare adequately before entering a new country, by anticipating concerns and establishing trust with the government.

Keywords: Humanitarian operations, Government restrictions, Case study

Introduction
Every year, around 500 disasters hit worldwide, causing about 75'000 deaths and 200 million affected victims (Van Wassenhove, 2006). Often, such catastrophic disasters affect the local communities' ability to respond, requiring external assistance by relief organizations (Holguín-Veras *et al.*, 2012). Such assistance is however not always welcomed by governments of affected countries, which may refuse humanitarian aid, or ban relief workers to enter the country (Balcik *et al.*, 2010). The importance of this topic has been recognized by several authors so far (e.g., Bratton, 1989, Chang *et al.*, 2010, Kovács and Spens, 2009, Kovács and Spens, 2011, Kunz and Reiner, 2012, Long and Wood, 1995, Seekins, 2009), but was never studied in depth until now. In addition to the numerous mentions in literature, empirical evidence that will be presented in this paper demonstrates the relevance of this problem for relief organizations.

Through an exploratory multiple case study conducted among four relief organizations, this paper attempts to identify and analyze governmental restrictions affecting the performance of relief supply chains. In particular, we try to answer the following research question: What is the dependency between characteristics of governments and the level of restrictions imposed on relief supply chains?

In order to answer this question, we compare the country-specific level of restrictions found through our case study with several government characteristics. We then try to

identify the dependency between these characteristics and the level of restrictions imposed on relief organization in a country.

Theoretical background

Governments play an important role in relief supply chains. They may coordinate activities of relief organizations (Balcik *et al.*, 2010, Tomasini and Van Wassenhove, 2003), support the relief effort through the military (Kovács and Spens, 2007), or regulate NGOs in order to increase their professionalism (Abbey, 2008). But governments can also restrict activities of relief organizations, and thus impede relief supply chains through different means. Some governments use famine as a weapon against their population, and therefore try to control the distribution of food (Murray, 2005). Driven by fears of foreign influence, some governments prevent relief organizations from accessing the affected areas (Long and Wood, 1995, Seekins, 2009). In other countries, restrictions are imposed through tariff and non-tariff barriers restraining imports of relief supplies. Such import barriers strongly affect the effectiveness and efficiency of relief supply chains, either by limiting the organizations' ability to prepare for disasters in a country (Kovács and Spens, 2009), by creating delivery delays (Van Wassenhove, 2006) or even by preventing relief supplies from being delivered (Long and Wood, 1995).

Some restrictions on relief supply chains are more difficult to identify, as they are not based on a specific regulation but are rather a consequence of extremely bureaucratic procedures. For example, relief organizations usually benefit from duty-free import but must however register their vehicle through a bureaucratic procedure which may take between 3 and 6 months (Pedraza-Martinez and Van Wassenhove, 2013). Such extreme bureaucracy has in the end a similar effect as non-tariff import barriers.

Similarly, there are situations in which governments do not purposely try to restrict activities of relief organizations, but are simply not willing to facilitate the humanitarian work by adapting their regulations (Akhtar *et al.*, 2012). For example, Chang *et al.* (2010) found that market regulation imposed by governments on supplies needed for reconstruction activities create disincentives for companies to engage in such tasks. Finally, Balcik *et al.* (2010) note that dysfunctional governments do not play their coordinating role during disasters, which leads to an unclear definition of the roles of the different relief organizations.

Research design

Although academic literature demonstrates the strong impact of governmental restrictions on relief supply chains, no empirical investigation has yet corroborated these findings. Based on a single case study as well as other research work (Schodl *et al.*, 2010) carried out with one humanitarian organization confronted with import barriers, we identified situations in which governmental restrictions have a strong impact on relief supply chains. These initial impressions were by no way sufficient to build theory, and additional empirical data had to be collected in order to confirm our initial findings. However, due to the lack of previous research focusing on this topic, the study had to be an explorative one, therefore we had to exclude the survey methodology, for which existing testable variables and relations are needed (Forza, 2002). This lack of previous knowledge on the topic justified the use of an exploratory approach such as case study research which allows identifying unexpected variables and relationships (Voss et al., 2002). Also, the case study research methodology is particularly well fitted for analysing highly complex subjects (Stuart et al., 2002), such as the one of governmental restrictions which include several actors (governments,

donors, relief organizations) interacting in different activities (customs clearance, advocacy, fundraising, etc.). Given this high level of complexity and numerous interactions, this topic cannot be studied out of its context and therefore has to be investigated in its natural setting. Case study research methodology allows such in-context analysis (Yin, 2009), in opposition to axiomatic research for example where the problem under study has to be isolated and taken out of its context. Case study research also allows to develop theory through observation of actual practices (Meredith, 1998), which is particularly useful in an explorative phase where the relevant theory is not yet known. Finally, this research on governmental situational factors deals primarily with "why", "what" and "how" questions, to which case study research can answer particularly well (Voss et al., 2002).

Based on the reasons presented above, we found that case study research was the optimal method for our study, and therefore decided to conduct a multiple case study among four relief organizations headquartered in Europe. These case organizations were chosen following a polar type theoretical sampling mechanism, where cases are chosen not for statistical reasons but for their ability to fill different theoretical categories (Eisenhardt, 1989). This selection process was conducted independently by three researchers, based on the analysis of secondary documents, such as annual reports. We conducted 22 interviews (5-6 per organization) following a structured protocol, first at the headquarters and then at the program level in Chad. By doing so, we were able to collect information about governmental restrictions in potentially 146 programs (i.e., all programs conducted worldwide by the case organizations). Respondent validation and final proofreading of the protocols by each organization was used to ensure validity and reliability of the collected data. The interview transcripts were analyzed independently by two researchers in order to increase reliability. Instead of detailing each specific step of our research plan, in Table 1 we summarize the actions we took in order to increase and guarantee the rigor of the research process on different quality dimensions according to Gibbert and Ruigrok (2010) and Yin (2009).

Table 1 – Actions taken to increase and guarantee rigor of research process

Quality criteria	**Actions**
Internal validity	- Link empirical results with existing literature - Develop propositions based on a conceptual research framework - Seek convergence between propositions and empirically observed patterns
External validity	- Collect data at headquarters, from potentially 146 programs worldwide - Apply theoretical sampling mechanism, filling theoretical categories - Collect data until theoretical saturation is reached
Construct validity	- Triangulate between multiple sources of evidence - Use a structured interview protocol - Maintain a clear chain of evidence
Reliability	- Conduct data collection and analysis with two researchers - Validate interview notes by respondents - Validate final draft of the paper by case organizations - Integrate suggestions from case organizations in final version of the paper - Use a structured interview protocol containing fixed-choice answers - Allow replication through precise documentation of the research process

The structured interview protocol which guided our data collection allowed us to identify, in a systematic way, all type of governmental restrictions experienced by each organization in every country of our sample. As each case organization is not active in every country, we calculated the average number of restrictions faced in every country.

This was performed by summing up the total number of restrictions reported for each country, and dividing it by the number of organizations which mentioned issues in this country.

While the number of case organizations (4) and interviews (22) is optimal for a case study research methodology, it is by no way sufficient to allow statistical generalization (Yin, 2009), or in other words, to infer conclusions from a sample to the whole population. We therefore preferred to apply analytical generalization, where empirical observations are used to generate theory as recommend by Yin (2009). This was possible due to the theoretical sampling mechanism we applied for selecting case organizations based on their theoretical contribution rather than for statistical reasons (Eisenhardt, 1989). However, such an approach does not allow for inductive inference, as one observation does not allow to generate a theory (Popper, 1959). For this reason, we selected the deductive method of testing hypothesis developed by Popper (1959). This method tries to falsify deterministic propositions based on empirical evidence rather than verifying them, and only if the falsification is not possible, can the theory be said to be "corroborated by past experience" (Popper, 1959). Motivated by this approach, we tried to invalidate the relations between the level of restriction imposed by governments on relief supply chains and each of the different indexes describing government characteristics (state fragility, democracy score, political freedom, corruption perception, ease of doing business, logistics performance). Whenever we found a country contradicting this relation, the relation was invalidated. Only relations for which we did not find contradicting evidence were considered as corroborated by our empirical experience.

Results

Through our case study methodology, we identified 44 occurrences of governmental restrictions experienced by our case study organizations in 18 countries. Table 2 lists the types as well as some examples of government restrictions on relief supply chains identified in our sample.

Table 2 – Types and examples of governmental restrictions imposed on relief supply chains

Type of restrictions	**Examples**
Import barriers	Tariffs, Delays at customs clearance, Extreme complexity of clearance procedures, Rules of origin, Ban of import on medicines and satellite communication equipment
Access barriers	Restriction of access of staff (visa) or organization
Control of activities	Extreme governmental control of NGO activities and movement
Corruption	Bribery requested for customs clearance of relief items, Imaginary taxes created
Bureaucracy	Numerous authorizations needed, Complex administrative procedures (car registration, labor law, etc.)

Table 3 shows the average number of restrictions experienced by our case organizations in each country (first column), together with the different indexes we used in our analysis for characterizing governments (see next section).

Given the fact that these indexes are compiled and published by various institutions and following different rules, yearly indexes may cover the previous year, the current year or the upcoming year. In order to avoid biases due to varying time periods, we decided to use the most recent figures available for each index at the time when the data collection was conducted (Fall 2011). We had to remove Libya from our sample due to

the regime transition in 2011, and most of the available scores did not yet reflect these changes.

Table 3 – Number of restrictions and political, corruption and regulation scores in 2010

Country	Calculated average number of restric-tions	POLITICAL			CORRUP-TION	BUSINESS REGULATION	
		Polity State Fragility *2010*	Polity Democracy Score *2010*	Freedom House Status *2010*	TI Corruption Perception *2011*	WB Ease of Doing Business *2012*	WB Logistics Performance Index *2010*
Somalia	2	25	-	Not free	1	-	1.34
Sudan	2	24	-2	Not free	1.6	135	2.21
DRC	2	23	+5	Not free	2	178	2.68
Myanmar	2.3	22	-6	Not free	1.5	-	2.33
Chad	1.8	22	-2	Not free	2	183	2.49
Ethiopia	2	21	+1	Partly-free	2.7	111	2.41
Liberia	2	18	+6	Not free	3.2	151	2.38
Cameroon	1.5	16	-4	Not free	2.5	161	2.55
Pakistan	1	15	+6	Partly-free	2.5	105	2.53
India	1	13	+9	Free	3.1	132	3.12
Colombia	1	12	+7	Partly-free	3.4	42	2.77
Tanzania	1	12	-1	Partly-free	3	127	2.60
N. Korea	1	10	-9	Not free	1	-	-
Senegal	1	9	+7	Partly-free	2.9	154	2.86
Israel	1	8	+10	Free	5.8	34	3.41
Georgia	1	8	+6	Partly-free	4.1	16	2.61
Russia	1	7	+4	Not Free	2.4	120	2.61
Bosnia	1	5	-	Partly-free	3.2	125	2.66

Analysis

According to Atack (1999), cooperation with democratic states, which accept the autonomy and independence of NGOs, is generally easier than with authoritarian states, which see them as enemies of political stability. This relationship between the level of democracy and the restrictions imposed by governments was also mentioned by respondents of our case study. Based on this finding from development literature as well as empirical evidence, we expected governments with a lower level of democracy to be more suspicious of relief organizations, and to impose more restrictions than other governments. In order to test this idea, we listed three indexes commonly used in political sciences for characterizing governments, the *Polity State Fragility* and *Polity Democracy Score* (Marshall and Cole, 2011), as well as the *Freedom House Status* (Freedom House, 2010), which are considered as the best existing indices of democracy and the political environment covering most countries of the world each year (Howard and Roessler, 2006). Based on these characteristics, we developed the first three propositions we wanted to test:

P1: The more democratic a regime, the less restrictions it imposes on relief supply chains

We measured the democracy level of a regime with the Polity Democracy Score, an index ranging from -10 (fully institutionalized autocracy) to +10 (fully institutionalized democracy) (Marshall and Cole, 2011). While we found evidence that autocratic (non-democratic) states such as Myanmar (-6) tend to impose more restrictions on relief supply chains (2.3 restrictions), there were also countries which contradicted these findings. North Korea is for example considered as strongly autocratic (-9) but shows a

relatively low average level of restrictions (1). On the other hand, rather democratic regimes such as Liberia (+6) or the Democratic Republic of the Congo (+5) impose high level of governmental restrictions on relief supply chains (2 restrictions). Due to these contradicting observations this proposition could be rejected.

P2: The more fragile a regime, the more restrictions it will impose on relief supply chains

The fragility of a regime was tested with the *Polity State Fragility* Index (Marshall and Cole, 2011). According to this index, which ranges from 0 (no fragility) to 25 (extreme fragility), state fragility can be defined as a combination of state effectiveness and state legitimacy (Marshall and Cole, 2008). When comparing the Polity State Fragility scores for each country with the average number of restrictions (see Fig. 1), we can see that fragile states clearly tend to impose more restrictions on relief supply chains than states with lower fragility scores. The grey line shown in Figure 1 depicts this tendency. In order to test this proposition, we tried to identify countries in the sample that diverged from this pattern, but there was no state with a fragility score of over 20 with fewer than 1.8 restrictions. Also, no state with a fragility score equal to or lower than 15 imposed more than one restriction.

Based on the absence of contradictory evidence, we could not reject this proposition and therefore conclude that in our sample of countries, fragile states (i.e., low effectiveness and legitimacy) tend to impose more restrictions on relief supply chains than states which are less fragile. In other words, this means that the more ineffective and illegitimate a government is, the more it tends to impose restrictions on relief supply chains on its territory. This high level of control and restrictions in fragile states has been confirmed by all our case organizations (e.g., ban of import of satellite communication equipment, authorization required for internal travels, complex customs clearance).

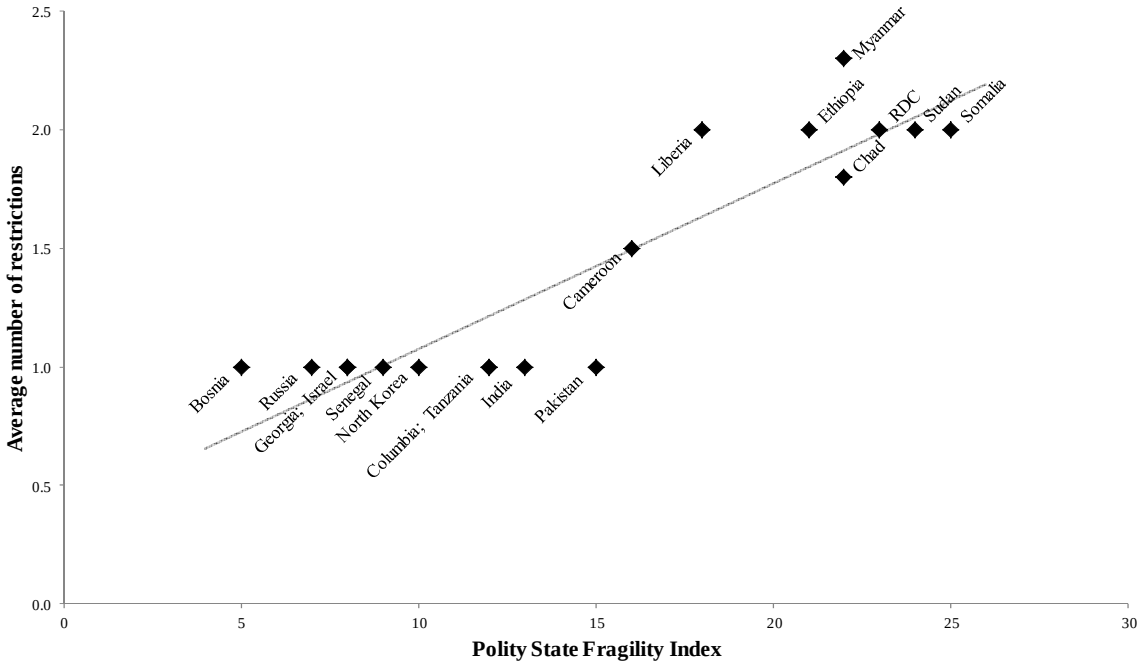

Figure 1: Average number of restrictions and State Fragility indexes of countries

P3: The more political rights and civil liberties a regime provides to his population, the less restriction it will impose on relief supply chains
The Freedom House Status can be either *Not Free*, *Partly Free* or *Free*, and indicates the state of freedom in a country. It is a combination of political rights and civil liberties of a country (Freedom House, 2010). In our sample, we found that countries imposing a high level of restrictions on relief supply chains are generally categorized as *Not Free*. However, the case of North Korea (*Not Free*, 1 restriction) and Ethiopia (*Partly Free*, 2 restrictions) contradict this pattern. Therefore we could reject this proposition.

As several respondents mentioned a strong link between corruption in a country and the level of restrictions imposed on relief supply chains, we wanted to test this relationship. Some respondents also mentioned a possible link between the business regulatory environment in a country and the level of restrictions imposed on relief supply chains. As several restrictions imposed by governments on relief organizations are related to the import process and transportation inside the country, an external expert suggested that the level of restrictions imposed by a government on relief supply chains may be related to the logistics performance prevailing in this country. In order to test these different suggestions, we developed the following three propositions.

P4: The higher the level of corruption in a country, the more restrictions the government will impose on relief supply chains
In order to test this proposition, we used the Corruption Perception Index (CPI) developed by Transparency International (2011), which describes the perceived corruption level of the government, ranging from 0 (country perceived as *highly corrupt*) to 10 (country perceived as *very clean*). While all countries imposing more than one restriction on relief supply chains have a high level of perceived corruption (i.e., CPI between 1 and 3.2), there are also examples such as North Korea or Pakistan which contradict this relationship, as they are considered to be highly corrupt, but only impose one restriction on average. Based on this contradictory evidence, we could reject this proposition.

P5: The more conducive the regulatory environment is to start and operate a local firm, the less restrictions the government will impose on relief supply chains
We evaluated the business regulatory environment in the different countries based on the Ease of Doing Business index published by The World Bank (2012). This index ranks 183 countries according to how favourable their regulatory environment is for starting and operating a business. We found some evidence that the business regulatory environment could explain the level of restriction imposed on relief supply chains, but again there were countries which contradicted this pattern, such as Ethiopia which is ranked on position 111 (i.e., more than 70 countries are worse in terms of business regulatory environment, but there is a high level of restrictions on relief supply chains). On the other hand, Senegal, ranked on position 154 on the Ease of Doing Business index (i.e., very strict business regulatory environment) imposes only one restriction on relief supply chains. This proposition could be invalidated for these reasons.

P6: The higher the logistics performance in a country, the less restrictions the government will impose on relief supply chains
We tested this proposition with the Logistics Performance Index (LPI) published by the Word Bank (2010). Each second year, this index rates 155 countries from 1 (worst performance) to 5 (best performance) based on different components such as customs,

timeliness, logistics competence (The World Bank, 2010). Here also we find a relationship between the logistic performance in a country and the level of restrictions imposed on relief supply chains. However, we found countries with similar levels of logistics performance (e.g., Pakistan, Cameroon, Chad, all around 2.5) showing different levels of restrictions imposed on relief organizations (e.g., 1, 1.5, 1.8). We could invalidate this proposition based on these reasons.

Discussion

We have tried to identify which characteristics of governments explain the level of restrictions imposed on relief supply chains. We could not confirm our initial expectation that the democracy level would be the factor which adequately explains the number of restrictions. Other possible explanations were also tested, such as the political freedom level, the corruption level of a regime, the business regulatory environment as well as the logistics performance in a country. While these characteristics all showed some links with the level of restrictions found in different countries, we also found contradicting examples for all of them. Following the approach suggested by Popper (1959), and because of our relatively small sample size which would not be sufficient to generate statistical inference, we invalidated all relationships for which we found contradicting examples. The invalidation of hypotheses based on single examples is of course a very strict approach, and we do not pretend that it is the correct method in every situation. We opted for this conservative and cautious approach in order to guard against possible criticism regarding the limited sample size (18 countries), and to increase the validity of our findings.

We also found that state fragility, a combination of the effectiveness and legitimacy of a government, explains well the number of restrictions on relief supply chains in all countries of our sample. This means that more ineffective and illegitimate a regime is, the more it tends to impose restrictions on relief supply chains. This can be explained by the fact that such regimes face a higher risk of being overthrown, resulting in fears that autonomous international organizations will challenge their political control (Coston, 1998). As a consequence, such regimes impose stronger controls on the activities of relief organizations. This is confirmed by Bratton (1989) who found that a government with a low political legitimacy will be less permissive towards the voluntary sector. According to this author, such governments often control relief organizations through multiple tools (registration of NGOs, customs clearance, security clearance) and different government units.

As a concluding remark for this paper, we mention its limitations. First, the small sample size limits the generalizability of our findings. We tried to overcome this limitation by using a method borrowed from qualitative research, namely the falsification of hypothesis instead of statistical generalization. Second, while the transformation of qualitative data (examples of restrictions mentioned by respondents during interviews) into quantitative data (average number of restrictions per country) is supported by literature (Patton, 2002), it involves a loss of depth of data. Indeed, we consider each type of restriction having the same importance, which is of course not the case in practice. Finally, collecting data through a structured interview protocol does not guarantee that all restrictions occurring in each program have been mentioned, as respondents are biased towards the experiences which had the highest impact on them. We tried to reduce this bias by interviewing at least five staff members in each organization, and by requesting respondent validation at different steps of the research process. Moreover, when collecting data on complex issues such as this one, there is

always a high degree of respondent subjectivity involved, even with quantitative methods such as surveys which are also based on the perception of the respondent.

Conclusion

The influence of governmental restrictions on relief supply chains has been mentioned by several authors so far, but was never analyzed specifically in academic literature, despite its practical relevance. This paper intends to fill this gap. In particular, we tried to identify the characteristics of governments which explain the level of restrictions imposed on relief supply chains. In order to do so, we tested several indexes characterizing the political environment, the corruption level and the business regulatory environment of countries. While each of the indexes we tested explained the level of restrictions to some extent, we found countries contradicting this relationship for all but one index. Indeed, we found that state fragility, a combination of state efficiency and legitimacy, is the characteristic of governments which best explains the level of restrictions a government imposes on relief supply chains. Coming back to our proposition P2, we can therefore state that *the more fragile a regime, the more restrictions it will impose on relief organizations,* as in our sample, not a single country deviated from this pattern. This proposition is therefore "corroborated by past experience" (Popper, 1959) based on the 18 countries of our sample.

Our paper also provides a practical contribution for relief organizations. Knowing that fragile states tend to impose stronger restrictions on relief organization helps them to better prepare before entering a new country, by understanding and anticipating the fears of the local government. It also encourages organizations to engage proactively with these governments, by reassuring them about their political neutrality.

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