

Policy Brief

Understanding Conflict Dynamics
and Impacts in Indonesia



BANK DUNIA | THE WORLD BANK

**Conflict and Development
Program**

53334

Edition II

February 2010

The Effect of Troop Withdrawal on Extortion: Decentralized Corruption on Trucking Routes in Aceh

This note is based on the following article:

Olken, Benjamin A. and Patrick Barron (2009). "The Simple Economics of Extortion: Evidence from Trucking in Aceh." *Journal of Political Economy* 117(3): 417-452.

Two series of Policy Briefs are published by the Conflict and Development program within the World Bank Indonesia country team. The first, "Understanding Conflict Dynamics and Impacts," summarizes the results of research on conflict in Indonesia. These briefs draw out lessons for understanding and responding to conflict in other middle-income countries. The second, "Evaluating Responses to Conflict," summarizes the results of evaluations and assessments of conflict programs, and the methodological implications of how we can best measure the impacts of peace-building programs. All Policy Briefs are available at www.conflictanddevelopment.org

Extortion by police and military personnel manning roadside security posts has been a consistent problem in each of Indonesia's areas of large-scale conflict. The staged withdrawal of security forces from Aceh following the 2005 Helsinki peace accord presented an opportunity to observe the effect of a reduction in the number of security posts on the overall cost of illegal payments for trucks to transport goods. A Conflict and Development (C&D) program study found that troop withdrawals during the first six months after the peace agreement led to a decrease in extortion, but that illegal payments decreased by a smaller proportion than did the number of security posts. An 80 percent reduction in the number of posts during the period of the study produced only a 51 percent reduction in the amount of bribes paid at posts.

The discrepancy can be explained by thinking of extortion at security posts in terms of a market of corruption, with each post free to set the amount of illegal payments it extorts. When troops were withdrawn, changing the structure of the corruption market, the remaining posts each adjusted their prices upwards, but not by enough to offset the effect on the overall level of illegal payments caused by the reduction in posts. Had the amount of illegal payments extracted by the posts been set centrally, for instance by a provincial commander, prices would have been expected to be raised sufficiently at each post to keep the overall level of illegal payments constant.

There are two implications for the Government of Indonesia's ongoing commitment to combat corruption and for

anti-corruption efforts elsewhere. First, it suggests that in many cases, a simple policy of reducing the number of roadside security posts on a road may lead to less corruption. Second, the case illustrates that tackling corruption by targeting the top level of an organization could actually lead to higher bribes being charged, if doing so causes a centralized scheme of bribe setting to become decentralized.

INTRODUCTION

The 2005 Helsinki peace accord between the Government of Indonesia and the Free Aceh Movement required the government to withdraw all security force personnel not permanently stationed in Aceh. As a result, 31,690 military and police personnel—more than half the number in the province when the peace accord was signed—were withdrawn in four waves between September 2005 and January 2006.

The personnel withdrawn had been responsible for manning many of the security checkpoints along Aceh's roads. As has been the case in other conflict areas in Indonesia, these posts routinely extract illegal payments from truck drivers. In Aceh, these payments have taken four main forms: troops at security checkpoints may collect payments, trucks may pay a monthly protection fee or pay for convoy protection by the police, or overweight trucks may pay bribes to provincial transport officials at weight stations. The amount of payments extracted in late 2005 and the first half of 2006 were large: the C&D study summarized in this note found that, on average, illegal payments amounted to 13 percent of the cost of operating a truck for each trip, more than the total wages received by the truck driver and his assistant.

Figure 1: Trucking routes to and from Aceh



Since the 1990s, observers have started to model systems of corruption such as these security posts in terms of conventional commercial markets (Shleifer and Vishny 1993). Corrupt officials act like profit-maximizing firms and the level of corruption is determined by three factors: the structure of the market for bribes, the extent to which demand for corrupt officials' services varies in response to price changes, and the degree of coordination between corrupt officials. As in other markets, local 'monopolies' may exist; if each official is free to set their own price, they may not fully consider the effect of them charging higher prices on the prices that other corrupt officials can charge. This 'double marginalization' means everyone loses. In the Aceh case, the price of using the road becomes very high, costing trucking companies and consumers. And the posts actually collect less money than they would have if they had coordinated, because so few people use the road.

Because corruption is secretive, it is very difficult to observe whether security posts are coordinating

(for instance, if a central authority is setting an overall price for the road) or engaging in double marginalization (a decentralized system where each post sets its own price). The withdrawal of troops from Aceh provided an opportunity to observe whether double marginalization had been taking place:

- If the model of a market of corruption was not appropriate, then the price of bribes would have been expected to decrease in line with the decrease in the number of posts.
- If price setting for illegal payments was centralized, then the overall cost in illegal payments to use the road would not have decreased at all, as each post would have raised the amount collect by just enough to compensate for the troop withdrawals.
- If prices were decentralized, and double marginalization was occurring, higher bribes would have been charged at each security post in response to the change in the structure of the market (i.e. fewer posts), but the overall cost of using the road

would also change because no coordination between posts was taking place.

This note addresses two key questions:

- What effect did troop withdrawals have on the pattern and overall levels of illegal payments made by trucks on the two routes surveyed?
- What anti-corruption strategy is best suited to combat extortion of trucking in post-conflict contexts such as Aceh?

METHODOLOGY

To collect data on extortion, the C&D program recruited local Acehnese enumerators to accompany truck drivers on their regular routes to and from Aceh. As virtually all truck drivers have at least one assistant anyway, the surveyors blended in and those manning the checkpoints were presumably unaware of their presence. The survey ran from November 2005 until July 2006. In total 304 trips to and from Aceh were made and more than 6,000 illegal payments were observed.

The survey covered two routes:

- The 637 km journey from Meulaboh on the west coast of Aceh to Medan, the capital of North Sumatra;
- The 560 km journey along the east coast of Sumatra from the capital of Aceh province, Banda Aceh, to Medan.

Enumerators were placed on the trucks of several cooperative firms on each route, with the knowledge of each driver. The enumerators recorded the quantity and frequency of bribes as well as the context of each transaction. Efforts were made to obtain as representative a sample as possible of the journeys made by each firm, but the survey was not necessarily representative of all trucks traveling on each route. In particular, certain goods such as timber that are carried by special trucks were not included in the survey.

To observe the effects of troop withdrawals, the C&D study compared data on bribes in Aceh and North Sumatra. Troops were only withdrawn from Aceh but trucks going to and from Medan also had to pass through North Sumatra. As such, observed changes in payments in North Sumatra could be attributed to troop reductions along the portion of the route running through Aceh province.

Additionally, taking advantage of the fact that troop withdrawals in Aceh were staggered, the study looked at how the cost of passing through given districts changed as troops were withdrawn from that area. This allowed for the impacts of changing prices over time to be accounted for.

This was the first large-scale study to attempt to directly observe actual bribes in the field. Direct observation allowed the study to record data on each payment made, checkpoint by checkpoint, and avoided the problem of drivers exaggerating the amount of bribes paid in post-trip interviews.

An Asia Foundation study has since adapted the C&D methodology for a study of costs along nine domestic trucking routes in Indonesia (Sudjana and Hergesell 2008).

FINDINGS

The amount of bribes charged at each remaining security post changed as the number of posts decreased. This suggests that the behavior of corrupt security force personnel along the Aceh-North Sumatra roads can be modeled in terms of a commercial market, in which changes to the structure of the market (in this case, less posts) affect the behavior of all remaining actors.

A reduction in the number of checkpoints produced a decrease in the overall amount of illegal payments for each trip, but the overall decrease was offset by each remaining checkpoint charging a higher amount. The 80 percent reduction in posts on the Meulaboh-Medan route (from 90 to 18 posts) produced a 51 percent reduction in the average overall payment at checkpoints. On the Banda Aceh-Medan route, where no significant troop withdrawal took place during the survey period, no increase in prices at each post was observed (Figure 2). The effects observed on the Meulaboh-Medan route thus should be attributable to troop withdrawals along the Aceh portion of the road, and not to unobserved time effects.

The pattern of increased payments at posts on the North Sumatra portion of the Meulaboh-Medan route corresponds to a model of decentralized price setting. If the total amount of payments had been set by a central authority, the overall amount of illegal payments should not have decreased as the number of posts reduced. The behavior of the North Sumatra posts, where each post increased its price but not by enough to fully offset overall lost revenues on the entire route, suggests that each post was free

to set its own prices. These posts engaged in double marginalization.

The pattern of increased payments at remaining posts on the Aceh portion of the Meulaboh-Medan route suggests that price setting is also decentralized within each district. Price setting at each post in Aceh adjusted as the number of posts decreased, but the share of bribes collected in each district also changed. If price setting had been centralized at district level – certainly a plausible hypothesis as military and police commands are organized by district – then the share of bribes collected in each district should not have changed even as the number of posts in the district decreased.

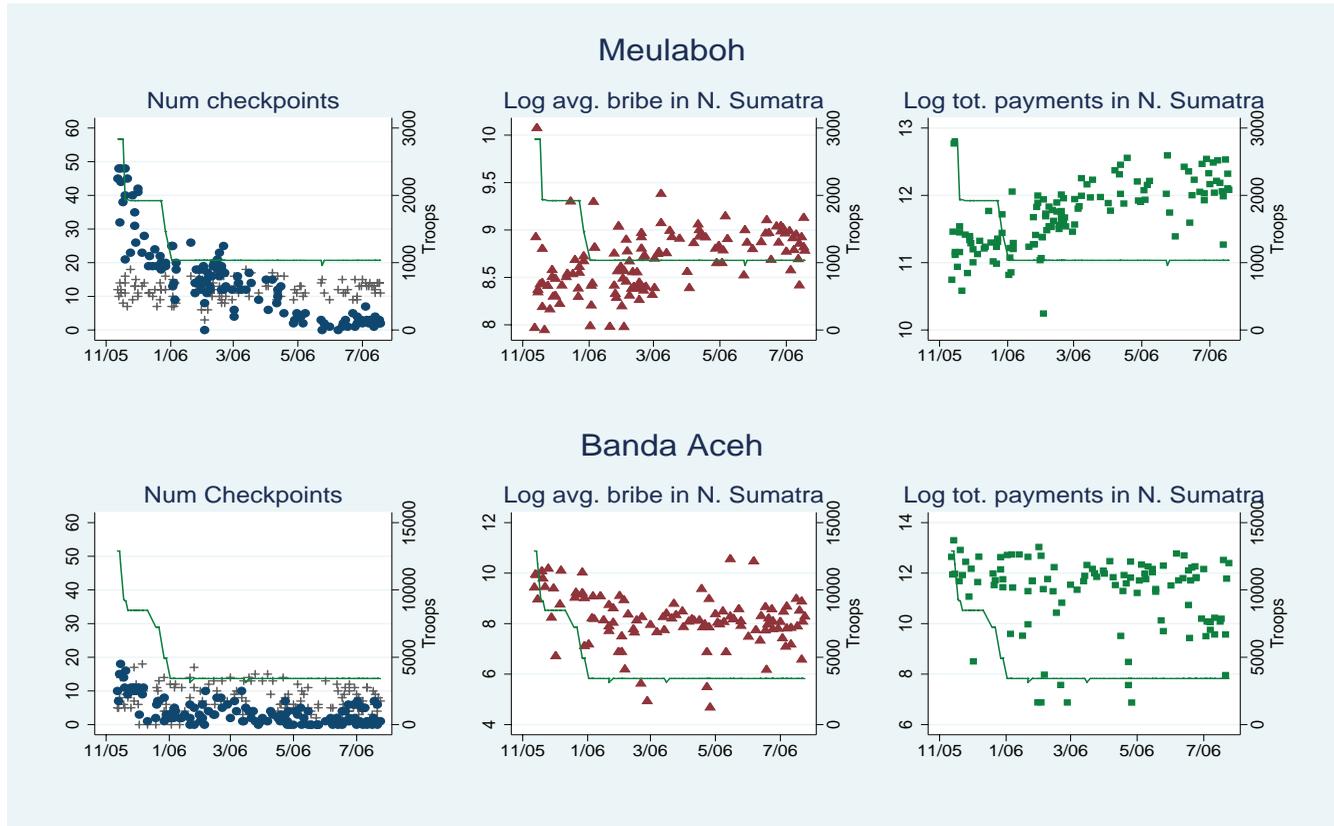
CONCLUSIONS

The withdrawal of troops from Aceh under the Helsinki peace accord presented an opportunity to investigate whether extortion along the main land transport routes to and from Aceh was centralized or decentralized. The study clearly demonstrated that military and police personnel were engaging in double marginalization – trying to maximize their own profits without regard for the effect on demand to use the road.

The withdrawal of troops produced an atypical result with respect to this double marginalization. Under the classic market model of corruption, bribe levels are lower when a central authority sets their level, because the central authority seeks the ideal balance between bribe levels and demand to use the road. But in Aceh, the lack of a centralized authority actually benefited road users when the number of troops was reduced. A centralized authority could have been expected to hold the price of using the road constant, despite fewer posts. Under the decentralized pattern of extortion, the remaining posts charged higher bribes, but did not raise their prices by enough to keep the overall cost in illegal payments of using the road constant.



Figure 2: Impact of checkpoint decrease on bribes paid



Notes: Each observation is a trip. Dots in the left column show the number of checkpoints encountered on the trip. Triangles in the center column show average prices paid at checkpoints in North Sumatra province on the trip. Boxes in the right column show the log of total payments made in North Sumatra province, including payments at weigh stations. The top panel shows trips on the Meulaboh road; the bottom panel shows trips on the Banda Aceh road. The solid line indicates the number of troops and police stationed in Aceh province at the time the trip began.

There are two policy implications from the Aceh case. The case confirms the utility of the market model of corruption, and as such suggests that targeting the top level of an organization could actually result in higher bribes being charged if a centralized price-setting system is consequently replaced by double marginalization.

On the other hand, the case suggests that in some cases a simple reduction in the number of roadside security posts may be an effective policy to combat extortion.

RECOMMENDATIONS:

- Investigating how the behavior of corrupt officials changes in response to changing conditions, such as the removal of troops, can provide a better understanding of how the extortion market operates.
- In particular, to understand how to combat extortion in post-conflict contexts, it is necessary to understand the degree to which it is coordinated and the mechanisms for coordination that exist.

- Direct observation of extortion payments is a viable strategy to understand these questions. Researchers should seek to develop creative strategies to measure other forms of post-conflict extortion.

PAPERS CITED

Shleifer, Andrei and Robert W. Vishny (1993). "Corruption." *Quarterly Journal of Economics* 108(3): 599-617.

Sudjana, Brasukra and Alexa Hergesell (2008). "The Cost of Moving Goods: Road Transportation, Regulations and Charges in Indonesia." Jakarta: Asia Foundation.

For further information, please contact:

info@conflictanddevelopment.org

Conflict and Development Team
 PSF - The World Bank Satellite Office
 Jl. Diponegoro No. 72, Menteng
 Jakarta 10310 - INDONESIA
 Phone: +62-21-314 8175
 Fax: +62-21-3190 3090
 email: info@conflictanddevelopment.org

Jl. Peurada Utama No. 11A,
 Gampong Peurada, Banda Aceh
 Phone: +62-651 755 1176
 Fax: +62-651 755 1178

Please visit our website:
<http://www.conflictanddevelopment.org>