

Introduction

Madagascar has been in the grip of a political crisis since the beginning of the year due to a dispute on the outcome of presidential elections. General strikes and roadblocks have hit hard on the economy of Madagascar and therefore on the welfare of its people.¹ This policy brief discusses the impact of the political crisis on rural insecurity, and more specifically on the incidences of theft.

1. The situation before the political crisis

a. 15% of the Malagasy communes state that improved security is the first priority for government intervention.

The importance of the rural insecurity problem is illustrated by interviews that were held with focus groups in each commune in Madagascar at the end of 2001. The focus group was given the choice between seven government interventions (health, education, security, transport, agriculture, environment, water) and had to rank them in importance. At the national level, 15% of the communes state that insecurity is the first priority for government intervention (Table 1). 13% of the communes reported security to be the second most important priority.

From a population perspective, the communes that mention security as their first or second most important priority are relatively less important (25% of the population), although their territories account for almost half of the country (map 1). The less populated and the most remote communes are suffering most of insecurity (Fafchamps and Moser, 2002). The province of Mahajanga is plagued most by insecurity problems. The number of communes that mention insecurity as the first priority for development is as high as 28% in this region. The attached map (map 1) shows that a large majority of

the communes south of Mahajanga City and north of Tulear City mention security as the most or the second most important problem in the communes.

Table 1: Priorities for development as stated by communal focus group (Sep.- Nov. 2001)

Priorities for government intervention	% of communes
Health	14
Education	10
Security	15
Transport	26
Agriculture	27
Environment	2
Water	6
Total	100

Source: Commune census, Cornell University

The problems of security in rural areas often concern the theft of cattle. Map 2 shows the cases of zebu theft that were reported in 2001. It illustrates the extent of zebu theft in Madagascar. The number of communes that report more than 200 zebus stolen in a year is significant. The three provinces most touched by this plague are the province of Mahajanga, Tulear, and Fianarantsoa. These figures correspond to the presence of approximately 32%, 30% and 11% of the national herd in 1995 in Mahajanga, Tulear and Fianarantsoa, respectively (Service Statistique, Direction d'Élevage, 1998). Fianarantsoa's figure is lower, although the movement of animals through this region via the national cattle market in Ambalavao would incite regional incidences of theft.

b. 64% of the rural households state that security conditions and risk of theft are bad.

The insecurity problem is confirmed by other sources. At the end of 2001, just before the presidential elections, INSTAT/DSM organized a household survey, representative at the national level. In this survey, rural households were asked on their perception of security in the village and the risk of theft of their goods. A follow-up question was then posed on the importance that the rural household assigned to security if the living conditions of the household were to be improved.

Table 2 shows the results of this survey. 59% of agricultural households report that the security conditions and risk for theft are "bad". 5% reports that it is very bad. Only 17% of the agricultural households report the situation to be good to very

¹ As primary data on the impact of this situation is scarce, the Ilo program, in collaboration with INSTAT and FOFIFA, organized a survey just before the roadblocks were lifted (during the month of June 2002) in rural communes in three provinces (Fianarantsoa, Mahajanga, and Antananarivo). The stratified sampling frame was set up in such a way to be as representative as possible of the situation in these provinces. Fivondronana were divided in six strata depending on the distance to the capital of the province (close, medium, far) and on the availability of a tarred road. In each strata, one fivondronana was selected for every province. In each fivondronana, four communes were selected randomly.

good. Consequently, a high 83% of the rural population thinks that improving security is important to very important.

Table 2: Perception of security by rural households (% of total population)

Security conditions and theft risk for your household goods?	%	If you want to improve your living conditions, importance of security?	%
Very bad	5	Very important	16
Bad	59	Important	67
Average	18	A bit important	8
Pretty good	11	Not that important	6
Very good	6	Not important at all	3
Total	100	Total	100

Source: INSTAT/DSM, EPM 2001

2. Incidences of theft since the political crisis

The incidences of insecurity are up. Compared to the period before the crisis, zebu theft and crop theft increased by 25% and 47% respectively.

Table 3 shows the two types of insecurity that were reported in the crisis survey. Overall, an increase in the incidences of theft is noticed. Crop theft increased by 47%. Before the crisis, an average of 0.15 cases per week per commune was reported. During the month of April/May 2002, this number increased to 0.22. The cases of zebu theft increased by 25%: 2.16 cases per week on average last year compared to 2.71 cases during the crisis.²

An analysis by province shows that the biggest increase in insecurity is seen in the province of Mahajanga and Fianarantsoa where the number of zebu theft increased by approximately 30%. However, numbers stolen in the Antananarivo region were reduced slightly by 3% which may have been encouraged by heightened security in and around the capital. The number of theft that is reported in Mahajanga and Fianarantsoa is significantly higher than in the province of Antananarivo. This reflects partly the higher number of cattle in these regions as stated previously.

Incidence of crop theft between the three regions also increased overall. Most significant figures are seen in the highly populated crop growing regions of Antananarivo and Fianarantsoa, while less densely populated areas in the drier savannas of Mahajanga region show lower increases (see Table 3).

The number of cases of theft that are solved has declined on average. The number has declined by 23%, from 0.39 cases solved last year to 0.27 cases solved this year (Table 3). Meanwhile, the region of Antananarivo saw improved recoveries of 62% for possible reasons cited above.

Table 3: Incidences of theft per week per commune (as reported in focus group interview)

Average	April/ May 2001	April/ May 2002	% change
Number of zebus stolen			
Antananarivo	0.88	0.85	-3
Fianarantsoa	3.48	4.51	+30
Mahajanga	2.39	3.11	+30
Total	2.16	2.71	+25
Number of stolen zebus retrieved			
Antananarivo	0.08	0.13	+62
Fianarantsoa	0.60	0.51	-15
Mahajanga	0.53	0.20	-62
Total	0.39	0.27	-23
Cases of crop theft			
Antananarivo	0.16	0.24	+50
Fianarantsoa	0.12	0.21	+75
Mahajanga	0.19	0.23	+21
Total	0.15	0.22	+47

Source: Crisis survey 2002, Ilo program, Focus group

3. Causes of rural insecurity

Panel data regressions were then run to determine the influence of different determinants in the change of insecurity. Two determinants that changed significantly during the crisis period compared to last year were looked at: poverty and law enforcement.

Cause 1: Poverty

Increasing poverty, due to the effects of the political crisis, has led to an increase in the incidence of crop theft.

Poverty increased dramatically during the crisis. It was estimated by the communal focus group that the percentage of the destitute population (defined as that part of the population that is unable to pay for any health and school fees), increased from 13% last year to 19% this year (Table 4). The category that had problems to pay for these expenditures increased from 27% to 37%. These results manifest that many people in Madagascar live within a critical margin, which is relative to their means, where they can either slip into poverty or greater poverty, respectively.

Table 4: Perceived evolution of poverty (as reported by the focus group)

	Proportion of the population (%)		Proportional change of the %
	April/ May 2001	April/ May 2002	
a. Can buy luxury items	31	19	-12
b. Can easily pay for school and health	29	23	-6
c. Have problems to pay for school and health	27	37	+10
d. Can not pay for school and health	13	19	+6

Source: Crisis survey 2002, Ilo program, Focus group

The results on the determinants of theft regression show that a 10% increase in the number of people that can easily pay for social services in the community leads to an 3% decrease in the number of crop theft

² Given the high seasonality in theft, focus groups were asked to compare to the same period last year.

(Table 4). Given that the importance of this category has declined since the start of the crisis, it explains partly the increase in crop theft. Hence, crop theft seems to be on the rise primarily by the increasing hardship and poverty. As stated above, densely populated areas of the Highlands, known for principally crop production, are more prone to this form of theft. It is important to add that this form of theft caters for the daily sustenance of poor households, therefore it underlines a far more profound problem bridging general security with food security.

Table 5: Panel regression results on the determinants of the incidence of theft*

Determinants***	Number of cattle stolen (log)		Number of cases of crop theft (log)	
	Coeff.	t-value	Coeff.	t-value
Law enforcement personnel (log)	-1.895	-2.47	-0.177	-0.72
% rich**	-0.003	-0.74	-0.001	-0.51
% average	-0.001	-0.34	-0.003	-2.32
% extreme poor	-0.003	-0.45	-0.001	0.52
Adjusted R2	0.81		0.70	

*: numbers in bold are statistically significant at the 1% level

** : default is the poor group

***: commune dummies not reported

Cattle theft on the other hand does not seem to be influenced by poverty as the coefficients on poverty groups is not significant at conventional statistical levels. These results seem to confirm anecdotal evidence that this type of crime is not driven by poverty but more by mafia practices (ROI, 2002), and social hierarchies in rural areas dictating the customary theft of cattle between fiefdoms.

Cause 2: Deficient law enforcement

A decrease in the efficiency of law enforcement due to the political crisis has led to an increase in the incidence of zebu theft.

The gendarmerie has done significant efforts over recent years to reduce the incidence of crime. For example, the number of gendarmes in the field has increased by 33% in 2001 compared to four years earlier (ROI, 2002). The gendarmerie claims that due to their increased presence, cattle theft was reduced by 30% over four years. However, the political crisis led to two changes in the efficiency of the law enforcement system. As there were problems with the transportation system, it was more difficult for the police and the gendarmes to pursue theft cases.³ Second, the number of gendarmes present in the communes declined as there was increasing demand for these agents for other tasks.

The result of these changes for police and gendarmes show up in the incidence of theft. While crop theft shows an insignificant correlation with the presence

of police or gendarmes (as this type of crime might be harder to solve), zebu theft does show a correlated increase due to the decline of presence of law enforcement personnel. Based on the survey data, it is estimated that a reduction of law enforcement personnel by 10% leads to a higher incidence of zebu theft of 19%.

Conclusions

There is no evidence of an increase of insecurity, measured through theft data, in urban areas since the start of the political crisis. However, problems with rural insecurity became worse. Rural insecurity has been a major plague in rural Madagascar since centuries (Brown, 1995) and rural societies seem to have gone through theft cycles over the years.

The political crisis has contributed to an increase in the incidences of theft as it induced changes in two factors that have led to an increase in the incidence of theft in rural areas: 1. increase in poverty: it is estimated that poverty increased significantly during the political crisis and led therefore to an increase in the incidence of crop theft (compared to last year, incidences of crop theft increased by 50%); 2. decrease in the efficiency of the law enforcement system: because of lack of personnel and lack of means for law enforcement, zebu theft has been significantly on the rise in rural areas.

Even as the political crisis seems to be over, there are important lessons from this analysis. The results of the survey show what the major causes are of insecurity in Madagascar, i.e. poverty and weak law enforcement, and the quantitative importance of these determinants of theft. The government has to tackle both of these causes in a satisfactory manner if it wants to deal effectively with the insecurity plague, especially in rural Madagascar.

References

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Fafchamps, M., Moser, C., Crime, Isolation and Law Enforcement, July 2002, mimeo

Revue de l'Océan Indien, Vol de bovidés : une véritable mafia, January 2002, pp. 39-45

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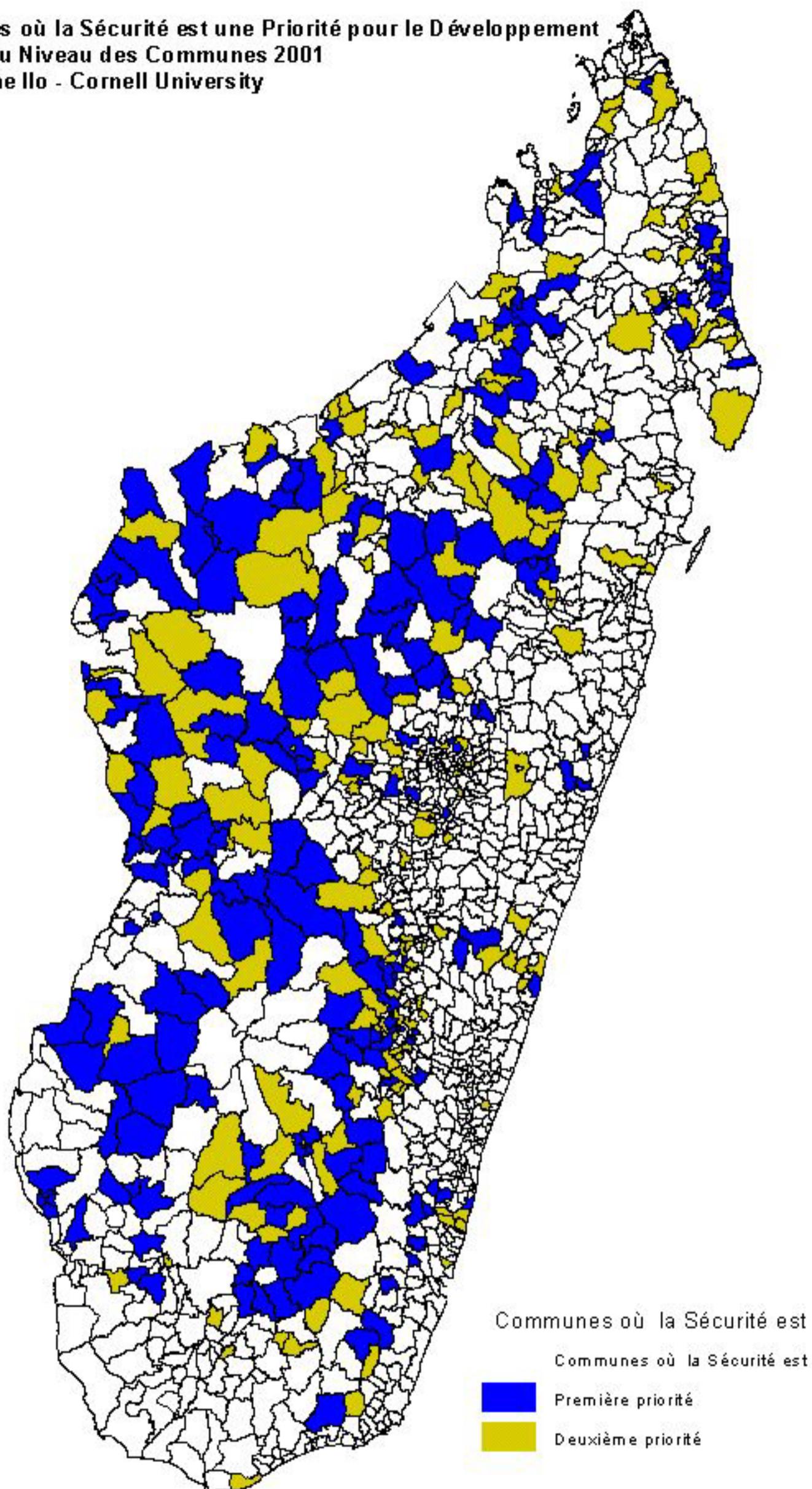
³ For example, the gendarmerie usually uses punctual interventions to pursue "dahalo" attacks. On average, they last 20 days, require 85 agents and cost about 20 million Fmg (ROI, 2002).

Carte 1 :

Communes où la Sécurité est une Priorité pour le Développement

Enquête au Niveau des Communes 2001

Programme Ilo - Cornell University



Carte 2 :
Nombre de Vols de Boeufs par An par Commune
Enquête au Niveau des Communes 2001
Programme Ilo - Cornell University

