Violence against Rich Ethnic Minorities:
a Theory of Instrumental Scapegoating

Yann Bramoullé   Pauline Morault*

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Abstract: In many parts of the developing world, ethnic minorities play a central role in the economy. Examples include Chinese throughout Southeast Asia, Indians in East Africa and Lebanese in West Africa. These rich minorities are often subject to popular violence and extortion, and are treated ambiguously by local politicians. We develop a formal framework to analyze the interactions between a rent-seeking political elite, an economically dominant ethnic minority and a poor majority. We find that the local elite can always make use of the presence of the rich minority to maintain its hold on power. When the threat of violence is high, the government may change its economic policies strategically to sacrifice the minority to popular resentment. We analyze the conditions under which such instrumental scapegoating emerges, and the forms it takes. We then introduce some social integration between both elites capturing, for instance, mixed marriages and shared education. Social integration reduces violence and yields qualitative changes in economic policies. Overall, our results help explain documented patterns of violence and segregation.

Keywords: elites, popular violence, ethnic minority, scapegoat

I. Introduction

In many developing countries, the economy can be seen to be dominated by a specific ethnic minority. The Chinese, for instance, have long played a key role throughout Southeast Asia. In the Philippines, they represent 1% of the population but control 60% of the private economy; the numbers for Indonesia are, respectively, 3% and 70% (Chua 2004). In East Africa, private economies are often controlled by "Indians", that is, descendants of Indian families who migrated during the British colonization.[1] In many countries of West Africa, the Lebanese diaspora plays a similar role.[2] Despite their importance for the economies of their countries of adoption, these rich minorities are often subject to popular violence and extortion. Well-documented episodes include attacks against Indians during the 1964 Zanzibar revolution, anti-Indian riots in Kenya in 1982, anti-Chinese riots in Indonesia in 1998, beatings and murders of Lebanese in Ivory Coast in 2011, violence against Chinese-owned factories in Vietnam in 2014, and kidnappings of Indians in Madagascar in recent years. Moreover, and as forcefully argued by Amy Chua, violence against "market-dominant" minorities seems to have been fueled by globalization, see Chua (2004). As the difference in wealth levels between rich and poor increases, popular envy and discontent increase as well, and violence may be further amplified by the actions of populist governments.[3]

More generally, local politicians seem to display an ambiguous attitude towards these communities. When times are good, business-oriented minorities seem to be warmly welcomed and well-treated. In fact, relationships between local politicians and market-dominant minorities often seem to devolve into crony capitalism. Examples include Suharto's well-documented favoritism towards his Chinese cronies in Indonesia in the

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[1]In Madagascar, Indians represent less than 1% of the population but own 50 to 60% of the country's economy (Indian Ministry of External Affairs 2002); In Tanzania, they represent 0.2% of the population and control 75% of the businesses (Puri 2013).

[2]For instance in Ivory Coast, the Lebanese represent less than 1% of the population but own 50% of the industrial sector, 99% of malls, 80% of the fish trade and export industry, 60% of the construction sector and 75% of the import and export of wood (The Daily Star Lebanon 2011).

[3]Bezemer and Jong-A-Pin (2013) find some support for Chua's claims in Subsaharan Africa.

1980s, the Goldenberg scandal in Kenya in the 1990s and corruption in the diamond industry in Sierra Leone. However, these same communities provide convenient scapegoats when popular discontent is brewing. Local governments often fail to protect them from popular violence, riots and looting, or even actively fan the flames of ethnic hatred. Auregan (2012) notes that Lebanese-bashing is regularly used by politicians in West Africa when the incumbent government is going through a difficult time. Hate-filled, outrageous declarations by politicians are not uncommon, see Adam (2009). Governments may also enact explicitly discriminating policies, ranging from preferential access to University for native students in Malaysia to the expulsion of more than 90 000 Indians from Uganda in 1972 by dictator Idi Amin Dada.

Market-dominant minorities have received surprisingly little attention from economists.[4] In this paper, we develop a formal framework to analyze the interactions between a local political elite, a rich ethnic minority and a poor majority. Our analysis helps explain the three stylized facts identified above: market-dominant minorities are prevalent throughout the developing world; they often find themselves the victims of popular violence; and, depending on circumstances, local politicians may either side with them or sacrifice them to popular discontent.

Our analysis builds on a growing literature, initiated by Acemoglu and Robinson (2006), which models interactions between an elite and a poor majority under the threat of violence. To date, most economics studies have viewed the elite as a homogenous, cohesive group. This is a strong simplifying assumption, inadequate to analyze the politics of developing countries with a market-dominant ethnic minority. We relax this assumption here and consider separate political and economic elites. Each group seeks to maximize its own payoff and their interests may be misaligned. The political elite chooses how much to tax formal economic activities and how much to redistribute to the people.[5] The poor majority may decide to become violent and

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[4]We review the scant existing literature below.

[5]We consider a non-democratic society throughout the analysis. In future research, it would be interesting to study the impact of the presence of a rich ethnic minority on democratization and democratic competition, see the Conclusion.

to appropriate resources by force. We assume that popular violence can be directed against either the political or the economic elite, reflecting the fact that specific social groups are generally targeted during violent episodes.[6]

We show that the presence of the rich minority has a first-order impact on outcomes. We find that it always allows the local political elite to maintain its hold on power.[7] When the economic elite is much wealthier than the political elite, it provides a natural target for popular discontent. In other cases, the government strategically manipulates its public policies to deflect popular violence towards the rich minority. It may reduce its tax rate and even transfer resources to the poor majority to transform the economic elite into the more attractive target, in effect applying a strategy of *instrumental scapegoating*. We show that scapegoating is actually a last resort strategy. When the threat of violence is not overly high, the government prefers to tax the economic elite at a high rate and to buy social peace by redistributing parts of its revenues to the people. The transition between peace and violence is discontinuous and leads to non-monotonic variations in economic policies. Comparative statics both confirm and qualify Amy Chua's thesis. While violence tends to be aggravated by increases in the payoffs of the economic elite, it may be mitigated by increases in the rents controlled by the political elite.

In a second stage, we relax the assumption of separation between the two elites. We consider some partial social integration, leading to utility interdependence between the two groups, for instance, via mixed marriages and shared education. In reality, rich ethnic minorities often tend to retain a strong separate identity, partly based on traditions and religion, and to remain close-knit, endogamous communities.[8] However, sociological and anthropological studies reveal substantial variation in their degrees

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[6]From a practical point of view, attacking government members and government buildings, or rioting and looting the houses and shops of the rich minority also involve different kinds of organization.

[7]In the absence of a rich minority, the political elite may be overthrown when the threat of violence is high. See Section 2 below.

[8]Such endogamy could also be a rational answer to the possibility of future violence and expulsion. Endogenizing the level of social integration would be an interesting direction for future research, see the Conclusion.

of integration. Part of this variation seems culturally determined. For instance, in East African countries and Madagascar, long-established Chinese migrants seem to be better integrated than descendants of migrants from India, see Fournet-Guérin (2009). We show that social integration strongly affects outcomes. It decreases the likelihood of the rich minority becoming the target of popular violence and may incite the government to buy social peace even without material benefits. We also find that integration changes economic policies, in particular leading the government to favor a reduction in tax rate over an increase in redistribution when seeking to avoid violence.

Our analysis contributes to the literature on the political economy of developing countries. We provide one of the first analyses of interactions between a rent-seeking political elite, an economic elite belonging to a specific ethnic community and a poor majority. Glaeser (2005) studies the strategic use of hatred speeches against an out-group when two political parties compete in elections. We consider a non-democratic government here, and show how it can use economic policies strategically to deflect popular violence. Anderson et al. (2013) study the impact of weather shocks on the persecution of Jews in Medieval Europe.[9] They develop a theoretical model to support their empirical analysis which shares some features with ours. However, instrumental scapegoating, central to our approach, is absent from theirs.[10] Their empirical finding that persecution may have strong economic determinants is in line with our framework and results. In a different context, Miguel (2005) also finds that scapegoating episodes have underlying economic determinants. Using local rainfall variation, he shows that witch killings in Tanzania may be caused by decreases in income rather than by irrational beliefs or cultural norms. In a political economy framework, we show that scapegoating may emerge for purely economic reasons and we provide a detailed analysis of its anatomy.

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[9]Voigtländer and Voth (2012) show that violence against Jews in medieval Germany partially determines persecution under Nazi Germany.

[10]Anderson et al. (2013) assume that popular violence is indiscriminate and, when unleashed, affects both elites equally. Thus, their framework cannot explain the prevalence of episodes of popular violence targeting rich minorities in the developing world.

The remainder of the paper is organized as follows. We present our model in Section 2. We analyze the interactions between the three groups under separate elites in Section 3. We relax this assumption and look at the impact of social integration in Section 4. We conclude in Section 5.

II. The model

We consider an economy composed of three groups: a local political elite, a rich ethnic minority and a poor majority. Group sizes are, respectively, n_e, n_m and n_p with $n_e, n_m \ll n_p$. Society is not democratic: the political elite takes all political decisions unless it gets ousted from power. We assume in Sections 2 and 3 that every group seeks to maximize its material payoff.[11] This means, in particular, that the political elite is purely rent-seeking and does not care about social welfare. In Section 4, we introduce some social integration between the economic and the political elites. We study how the interdependence in payoffs generated by such integration affects outcomes.

There are three sources of income in the economy. The political elite obtains some rents R originating, for instance, from natural resources or foreign aid. The formal sector of the economy is run by the ethnic minority and generates a taxable per capita income of y_m. People in the poor majority work in the informal sector in activities such as home-scale agriculture and earn a per capita non-taxable income of $y_p \ll y_m, \frac{R}{n_e}$.

Interactions between the local elite, the rich minority and the poor majority take place in three stages. The political elite first chooses a tax rate $\tau \in [0, 1]$ and a level of per capita transfer $t \geq 0$.[12] Formal economic activities are taxed at rate τ. People then decide whether to exert violence against the local elite (V_e), the rich minority (V_m), or to remain non-violent (N). If the political elite is not attacked, transfers are distributed to the poor majority and all individuals consume.

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[11]We consider a political elite which is sufficiently small and cohesive to act as a single actor. In contrast, the poor majority may suffer from problems of collective action. As discussed in Acemoglu and Robinson (2006), these difficulties are captured in the reduced-form parameter μ below.

[12]Members of the economic elite are not eligible to receive these transfers.

As in Acemoglu and Robinson (2006), we assume that raising taxes is costly. These costs, $C(\tau)$, capture both direct administrative costs and the distortionary effects of taxation on the economy. We assume that $C(0) = 0$, $C' > 0$, $C'' > 0$, $C'(0) = 0$ and $C'(1) > 1$.

When there is no risk of violence, a member of the local elite earns $\pi_e = \frac{1}{n_e}(R - n_p t + (\tau - C(\tau))y_m n_m)$, a member of the rich minority earns $\pi_m = (1 - \tau)y_m$ and a member of the poor majority earns $\pi_p = y_p + t$. To maximize its payoff, the political elite simply sets $t = 0$ and $\tau = \tau^*$ such that $C'(\tau^*) = 1$. The people do not receive any transfer, and the rich minority is taxed at the level that maximizes tax revenues for the group in power.

The possibility of violence modifies the analysis quite extensively. We make the following assumptions on the effects of violence. First, popular violence is directed against one of the two elites. Second, as in Acemoglu and Robinson (2006), we assume that when there is violence, a fraction μ of the resources are destroyed and that the people share what remains among themselves.[13] Third, faced with imminent violence the political elite can flee the country and obtain a payoff π_0 coming, for instance, from money diverted towards offshore accounts in the past.

Formally, if the people revolt against the elite in power, payoffs are $\pi_e = \pi_0$, $\pi_m = (1 - \tau)y_m$ and $\pi_p = (1 - \mu)(y_p + \frac{1}{n_p}(R + (\tau - C(\tau))y_m n_m))$. If the people target the rich minority instead, members of the different groups obtain, respectively, $\pi_e = \frac{1}{n_e}(R - n_p t + (\tau - C(\tau))y_m n_m)$, $\pi_m = 0$ and $\pi_p = (1 - \mu)(y_p + t + \frac{1}{n_p}(1 - \tau)y_m n_m)$.

We solve the game backwards. In the second stage and depending on tax and transfer levels, the poor majority decides whether to become violent and against which privileged group. In the first stage and anticipating popular actions, the political elite chooses public policies that maximize its material payoff.

We now analyze the benchmark case without a rich ethnic minority. If the people

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[13]We also assume that the resources of the group that is not the target of the violence are unaffected by this destruction.

remain non-violent, they obtain $\pi_p = y_p + t$, while members of the elite obtain $\pi_e = \frac{1}{n_e}(R - n_p t)$. If the people overthrow the elite, they obtain $\pi_p = (1 - \mu)(y_p + \frac{1}{n_p}R)$ and members of the elite flee the country $\pi_e = \pi_0$. We see three domains emerging. First, the people may not rebel even when the elite captures all rents. This is an equilibrium if $(1 - \mu)(y_p + \frac{1}{n_p}R) < y_p$, which is equivalent to $\mu > \mu_{threat} = R/(R + y_p n_p)$. If the cost of violence falls below this threshold, however, the people do not peacefully accept a situation with no redistribution. The elite may avoid violence by redistributing part of the rents. More precisely, it sets the lowest possible transfer, i.e., the transfer $\hat{t}$ that makes people indifferent between violence and non-violence. Formally, $\hat{t} = (1 - \mu)\frac{R}{n_p} - \mu y_p$. In that case, an elite member earns $\frac{1}{n_e}(R - n_p \hat{t}) = \frac{1}{n_e}\mu(R + n_p y_p)$. This is an equilibrium as long as such *self-protective redistribution* is not excessively costly for the elite. If $\pi_e < \pi_0$, the elite rationally decides to flee the country. This is equivalent to $\mu < \mu_{exile} = n_e \pi_0/(R + n_p y_p)$. To sum up:

Proposition 1 *Suppose that there is no rich ethnic minority. If $\mu \geq \mu_{threat}$, the political elite captures all rents and the poor majority does not rebel. If $\mu_{exile} < \mu < \mu_{threat}$, the political elite redistributes positive transfers $\hat{t}(\mu) = (1 - \mu)\frac{R}{n_p} - \mu y_p$ and people remain peaceful. If $\mu < \mu_{exile}$, the people overthrow the political elite.*

When the cost of violence takes intermediate values, the political elite *buys social peace* by transferring resources to the people on the condition that they remain non-violent. Since $\hat{t}(\mu_{threat}) = 0$, the transition to the regime of positive transfers is continuous. As the cost of violence decreases, this transfer increases until it reaches the point where it leaves the elite too impoverished.

How do changes in parameters affect outcomes? As rents R increase, observe that μ_{threat} increases while μ_{exile} decreases. On the one hand, the elite is richer, which makes it a more ready target for popular discontent. On the other hand, the elite is both more able and more willing to buy social peace, since it has more to lose by leaving the country. Overall, the range of parameters over which the poor majority receives a positive transfer expands. In contrast, an increase in y_p or n_p leads to a decrease in

both μ_{threat} and μ_{exile}. When the poor majority is richer or more numerous, violence is less attractive, making it easier for the political elite to buy social peace.

III.   Separate elites

In this section, we characterize the unique subgame perfect equilibrium of the game in the presence of a rich ethnic minority. We find that the existence of this third group enriches the analysis substantially, and first informally discuss its effects. We then state our main result formally and discuss its implications in more detail.

First, the presence of the rich minority increases the political elite's payoff via increased tax revenues. This increase in payoffs is double-edged. While the government has more resources at its disposal - and hence can more easily influence outcomes - it also becomes a more attractive target for popular violence. However, this negative effect is outweighed by a second, key consequence. The rich minority represents another group that can be attacked by the poor majority. We find that the political elite can now always avoid being overthrown. The government can deflect popular anger towards the rich ethnic minority.

We study precisely when and how the political elite is likely to sacrifice the rich ethnic minority. We find that the difference in wealth between the two elites plays a crucial role. Two domains emerge. On the one hand, the ethnic minority may be richer, after tax τ^*, than the political elite. This happens when $(1 - \tau^*)y_m n_m > R + (\tau^* - C(\tau^*))y_m n_m$. In that case, the government is not threatened by popular violence. The rich minority provides a natural target for popular discontent due to its large wealth. The government then simply sets its preferred policies of high tax and zero transfers and lets violence run its course when μ is low. Despite its rent-seeking behavior, the government ends up protected from popular anger by the presence of the rich minority.

On the other hand, the ethnic minority may be poorer than the political elite after tax

τ^*. Formally, $(1-\tau^*)y_m n_m < R + (\tau^* - C(\tau^*))y_m n_m$. In that case, we find that buying social peace is preferred by the government when the cost of violence is intermediate, while deflecting violence towards the minority is preferred when the cost of violence is low. To buy social peace, the government increases the levels of transfers as the cost of violence decreases, while leaving its tax unchanged. To turn the minority into a scapegoat, the government abruptly changes transfer and tax levels. Two cases emerge. When the ethnic minority is richer before tax than the political elite, the government simply lowers its tax rate and does not need to provide transfers. The ethnic minority becomes temporarily richer and hence provides a more attractive target. However, when the ethnic minority is poorer before tax than the political elite, the government now has to cancel its tax and make a positive transfer. The transfer is needed to provide an extra incentive for people to attack the ethnic minority, since it will not occur if the government is overthrown. In either case, the government deliberately manipulates its economic policies to deflect popular violence towards the rich ethnic minority. *Scapegoating is instrumental here*, and emerges as a way for the political elite to maximize its monetary payoff.

We next state our result formally. We introduce the following notations, and provide a detailed proof in Appendix A. As in Proposition 1, introduce $\mu_{threat^e} = [R + ((\tau^* - C(\tau^*))y_m n_m]/[R + ((\tau^* - C(\tau^*))y_m n_m + y_p n_p]$ and $\mu_{threat^m} = [(1 - \tau^*)y_m n_m]/[(1 - \tau^*)y_m n_m + y_p n_p]$. These are the cost of violence values that leave the poor majority on the verge of attacking the political elite (μ_{threat^e}) or the rich minority (μ_{threat^m}). Let $\hat{t}$ be the transfer that makes people indifferent between violence against the government and non-violence: $\hat{t}(\mu) = (1-\mu)[R+((\tau^*-C(\tau^*))y_m n_m]/n_p - \mu y_p$. When the economic elite is richer than the political elite before tax but poorer after tax, define $\bar{\tau}$ as the unique tax rate that satisfies $(1 - \bar{\tau})y_m n_m = R + (\bar{\tau} - C(\bar{\tau}))y_m n_m$ and $\mu_{scapegoat} = (1-\bar{\tau})y_m n_m/[R + ((\tau^* - C(\tau^*))y_m n_m + y_p n_p]$. When the economic elite is poorer than the political elite before tax, define $\bar{t} = (R - y_m n_m)/n_p$ and $\mu_{scapegoat} = y_m n_m/[R + ((\tau^* - C(\tau^*))y_m n_m + y_p n_p]$. We show in Appendix A that $\mu_{scapegoat}$ is precisely the value that makes the government indifferent between buying social peace and deflecting

violence towards the rich ethnic minority.

Proposition 2 *Consider a society composed of a local political elite, a rich ethnic minority and a poor majority.*

1. If $(1 - \tau^*)y_m n_m > R + (\tau^* - C(\tau^*))y_m n_m$:

- If $\mu \geq \mu_{threat^m}$, then $\tau = \tau^*$, $t = 0$ and there is no violence.

- If $\mu_{threat^m} > \mu$, then $\tau = \tau^*$, $t = 0$ and the poor majority attacks the rich minority.

2. If $(1 - \tau^*)y_m n_m < R + (\tau^* - C(\tau^*))y_m n_m$:

- If $\mu \geq \mu_{threat^e}$, then $\tau = \tau^*$, $t = 0$ and there is no violence.

- If $\mu_{threat^e} \geq \mu > \mu_{scapegoat}$, then $\tau = \tau^*$, $t = \hat{t}(\mu)$ increases when μ decreases and there is no violence.

- If $\mu_{scapegoat} > \mu$, then the poor majority attacks the rich minority. If $y_m n_m > R$, then $\tau = \bar{\tau}$, $t = 0$ while if $y_m n_m < R$, then $\tau = 0$, $t = \bar{t}$.

Let us highlight four implications of Proposition 2. First, as already mentioned, the political elite now always avoids popular violence. In particular, it can redirect the threat of violence and stay in power even in situations where it would flee the country in the absence of a rich ethnic minority.

Corollary 1 *In the presence of a rich ethnic minority, the local political elite can always maintain its hold on power and avoid popular violence.*

In a way, the economic elite acts as a fuse for the political elite. When the risks of an uprising become too strong, the government alters its public policies so as to become a less attractive target. Scapegoating here is not linked to considerations of religion, hate or identity.[14] This also implies that local elites may be particularly motivated, ex-ante, to attract an economically dominant minority to their country. In addition

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[14]In reality, these material aspects likely interact with behavioral dimensions of scapegoating.

to the monetary benefits expected from such a move, the minority community may provide a convenient way to contain future popular miscontent.[15]

Second, we find that even a purely selfish political elite prefers to buy social peace when the prospects of violence are not overly high. Turning the economic elite into a scapegoat is, in a way, a last resort strategy. Buying social peace is less costly for the government as it can still tax the economic elite heavily. Interestingly, this effect arises even in a static framework that does not account for future losses. Deflecting violence is costly, involving a significant loss of money for the government because of lower taxes and positive transfers.

Corollary 2 *When the political elite is richer after tax than the economic elite and when the threat of violence is not overly high, the government prefers to buy social peace rather than sacrifice the rich ethnic minority.*

Third, optimal public policies vary with the cost of violence. Suppose that the economic elite is poorer after tax than the political elite. Then the optimal tax rate decreases discontinuously at the transition between peace and violence, while the optimal transfer varies discontinuously and non-monotonically. Transfers increase with a decrease in μ under peace but decrease when the government decides to sacrifice the minority.[16] Since the government is poorer due to the drop in tax from τ^* to 0, the transfers required to avoid popular violence are lower.

Corollary 3 *At the transition between peace and violence, optimal tax and transfer levels decrease discontinuously.*

Fourth, let us examine how changes in parameters affect outcomes. We see that increases in the rents and in the revenues of the economic elite may have opposite effects. When R increases, the political elite becomes wealthier and hence a priori provides a more attractive target. Society may switch from regime 1 to regime 2

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[15]This raises the issue of the reasons why these communities settle in countries with risks of future violence. We simply note here that the economic benefits from entering a new market at the time of the original move may outweigh the potential costs from future violence.

[16]When $y_m n_m < R$, we show in Appendix that $\bar{t} < \hat{t}(\mu'_{scapegoat})$.

in Proposition 2. Within regime 2 and when $y_m n_m < R$, we see that $\mu_{scapegoat}$ is decreasing in R. Higher rents make the scapegoating strategy relatively more costly in that domain. By contrast, the economic elite is a more attractive target when y_m or n_m increases, and society may then switch from regime 2 to regime 1. Within regime 1, μ_{threat^m} increases. Within regime 2 and when $y_m n_m < R$, $\mu_{scapegoat}$ also increases as the government has stronger incentives to sacrifice the economic elite.[17] Finally, μ_{threat^m} and $\mu_{scapegoat}$ decrease following an increase in y_p or n_p. A richer majority is less likely to become violent.

These results both confirm and qualify Amy Chua's claims (Chua 2004). They point to the likelihood that globalization led to a much larger increase in the revenues of economic elites than in those of poor majorities. Our results indicate that this tends to yield more violence. However, our analysis also uncovers a potentially countervailing effect. Increases in the rents controlled by local elites tend to mitigate violence, since they facilitate the buying of social peace. These theoretical results could help guide future empirical analysis.

Our analysis has relied, so far, on the assumption that the political and economic elites form two separate groups. This assumption seems to apply particularly well to two communities: Indians throughout East Africa and the Lebanese in West Africa. Adam (2010) documents the very poor level of social integration of Indians in East-African societies. Indians typically live in separate residential neighborhoods, attend denominational schools, go to community hospitals and belong to select clubs. They essentially marry within their own communities, and are intent on preserving their culture of origin in all its dimensions (religion, language, clothing, food). Bierwirth (1999) shows that the Lebanese community is also socially marginalized in Ivory Coast. Endogamy is prevalent, and resented: "there has been very little intermarriage between Lebanese immigrants and Africans, a fact that most Africans deeply resent." (p.95). In addition, only 10% of the Lebanese-Ivorian population has acquired Ivorian citizenship.

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[17]In contrast, the impacts of R, y_m and n_m on $\mu_{scapegoat}$ in regime 2 when $y_m n_m > R$ are ambiguous because of indirect effects due to changes in $\bar{\tau}$, the optimal tax rate under violence.

Most of this community thus cannot vote and is, in fact, politically excluded.

As in the model, the political elite appears to benefit from the presence of these communities in two ways: through the vital role they play in local economies and through their usefulness as convenient scapegoats. See, in particular, the discussions in Adam (2010) on p.3 and in Bierwirth (1999) on p.83 and p.93. In stable times, the ethnic communities benefit from local elites' support, for instance, through favored allocation of import licenses and public contracts, Chua (2004, p.148-149 and 157).

In other times, ironically, the political elite may fan the flame of ethnic hatred by pointing out the supposedly excessive wealth of these communities, either publicly accusing them of taking advantage of the resources of their host country, or through direct discriminatory actions targeting, and thereby highlighting, their assets. In Tanzania, the nationalization of private businesses in 1967 and of real estate in 1972 directly affected Indians. In 1983, the government also launched an "Anti-Saboteur" campaign against fraudulent traffic that clearly targeted Indians, see Adam (2009). In Ivory Coast, Bierwirth (1999) explains that: "In 1992 and again in 1996, highly publicized sweeps were made by government officials to track down 'tax evaders' in the commercial quarters of Abidjan. In addition, both the official and opposition presses publish the names and pictures of Lebanese miscreants, helping to sustain the image of the Lebanese 'menace'" (p. 93). This is consistent with our analysis, in which the political elite manages to deflect popular violence towards the ethnic minority by strategically modifying its policies in order to make them the richest group.

However, the segregation between the economic and political elites is not absolute. Historical patterns reveal a substantial degree of variation in integration caused, in part, by cultural factors. In the next section we explore how partial social integration between the two elites affects their interactions, public policies and violence.

IV. Partial integration

In this section, we consider some partial level of social integration between the political and the economic elite. Members of these two groups may share the same socialization venues, may send their children to the same schools and may interact frequently in the workplace. As a consequence, they may also marry members of the other group. To fix ideas, we focus on mixed marriages in what follows; our modelling and results apply to broader forms of integration.

We now assume that all adult individuals in society get married and that spouses care about each other's payoffs. For simplicity, we assume that the sizes of both elite communities are the same: $n_m = n_e$. Define f as the proportion of mixed marriages between the rich ethnic minority and the local political elite. We consider a low enough value of f in what follows. We also assume that members of the poor majority never marry members of the elite. Let α be the marital coefficient of altruism with $0 < \alpha < 1$. The utility u_i of individual i with payoff π_i married to individual j with payoff j is then $u_i = \pi_i + \alpha \pi_j$. Therefore, social integration generates interdependence in utilities between the two groups.

As a consequence, mixed marriages introduce some dissension within groups. The utility of a member of the local elite is equal to $(1 + \alpha)\pi_e$ if he married within his community and $\pi_e + \alpha \pi_m$ if he married a member of the rich ethnic minority. Since f is low, we maintain our assumption that the local elite is able to act as a single actor. More precisely, the political elite seeks to maximize the average utility in the group, which is now equal to

$$u_e = (1 + \alpha(1 - f))\pi_e + \alpha f \pi_m$$

Introduce $\beta = \alpha f / (1 + \alpha(1 - f))$. Observe that u_e is proportional to $\pi_e + \beta \pi_m$ and that β is increasing in f and in α. Social integration leads the political elite to partially take into account the interests of the economic elite. By contrast, note that the average utility of a non-elite member is equal to $u_p = (1 + \alpha)\pi_p$ and the incentives of the poor

majority are unchanged.

Social integration has two direct effects. It first changes the preferred policies of the political elite in the absence of violence. Indeed, we have:

$$\pi_e + \beta\pi_m = \frac{1}{n_e}[R - n_p t + (\tau(1 - \beta) - C(\tau) + \beta)y_m n_m]$$

and the tax rate τ_β^* that maximizes the political elite's average utility satisfies $C'(\tau_\beta^*) = 1 - \beta$. This tax rate is decreasing in f and α. As both elites become more integrated, their payoffs become more interdependent and the political elite then reduces its tax levy on the economic elite. Interestingly, by reducing its wealth, it makes the political elite less likely to be threatened by popular violence. Thus, *social integration reduces the local elite's rent-seeking behavior* and hence its likelihood of being attacked.

Second, social integration changes the government's incentives when the ethnic minority is very rich and provides a natural target for popular violence. More precisely, suppose that the ethnic minority is richer after tax τ_β^* than the political elite. This is the counterpart to the first domain in Proposition 2. When the cost of violence is not overly high, and in the absence of government intervention, the people attack the minority. Due to social integration, however, the government now stands to gain from intervening and protecting the minority. The government may buy social peace even when not directly threatened by popular violence. In a way, such *altruistic protection* is the opposite of instrumental scapegoating.

We now characterize the subgame perfect equilibrium of the game under partial integration. As in Proposition 2, the equilibrium depends on the relative after-tax wealth situations of the two communities. (We provide a detailed proof in Appendix A). However, the two domains now have different boundaries and yield different optimal policies. In the first regime, the ethnic minority is richer after the altruistic tax τ_β^* than the political elite. This happens when $(1 - \tau_\beta^*)y_m n_m > R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m$. Define $\mu_{threat_\beta^m} = (1 - \tau_\beta^*)y_m n_m / [(1 - \tau_\beta^*)y_m n_m + y_p n_p]$. This is the cost of violence value below which the people are ready to attack the rich minority. When $\mu < \mu_{threat_\beta^m}$, the

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government first provides some altruistic protection for the minority. We show that to diffuse the threat of violence, the government increases the tax rate as μ decreases. This reduces the wealth of the minority and hence its attractiveness as a target. Of course, this also makes the political elite a more attractive target. When f is low enough, however, the political elite stops offering altruistic protection before this can put it at risk. Below a critical level $\mu = \mu_{protec}$, maintaining peace is too costly and the government will let popular discontent run its course. In that case, the government chooses its policies the same way as when there is no integration.

In the second regime, the ethnic minority is poorer after tax τ_β^* than the political elite. Formally, $(1 - \tau_\beta^*)y_m n_m < R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m$. The political elite is now a natural target for popular anger. Define $\mu_{threat_\beta^e} = [R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m]/[R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m + y_p n_p]$ as the critical level of the cost of violence below which the poor majority is ready to attack the local elite. Note that since $\tau_\beta^* < \tau^*$, $\mu_{threat_\beta^e} < \mu_{threat^e}$. As discussed above, the reduction in rent-seeking behavior induced by social integration also provides some protection against violence. When μ falls below this threshold, the government modifies its economic policies to buy social peace. However, the optimal policies are deeply altered by social integration. Without integration, Proposition 2 tells us that in this domain, $\tau = \tau^*$ and t increases when μ decreases. By contrast, with integration, $t = 0$ and τ decreases as μ decreases. We discuss these policy changes in more detail below. The decrease in tax reduces the wealth of the political elite and its attractiveness as a target. When μ is too low, however, buying social peace is too costly and the local elite sacrifices the rich minority. Let $\mu_{scapegoat_\beta}$ denote the value of the cost of violence below which the minority is sacrificed. We see that $\mu_{scapegoat_\beta}$ decreases as β increases. Social integration reduces the use of instrumental scapegoating.

Proposition 3 *Suppose that the local political elite and the rich ethnic minority are socially integrated with f low enough.*

1. If $(1 - \tau_\beta^*)y_m n_m > R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m$.

- If $\mu \geq \mu_{threat_\beta^m}$, then $\tau = \tau_\beta^*$, $t = 0$ and there is no violence.

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- *If $\mu_{threat^m_\beta} > \mu > \mu_{protec}$, then τ increases as μ decreases and there is no violence.*

- *If $\mu_{protec} > \mu$, then the poor majority attacks the rich minority. If $(1 - \tau^*)y_m n_m > R + (\tau^* - C(\tau^*))y_m n_m$, then $\tau = \tau^*$, $t = 0$. If $(1 - \tau^*)y_m n_m < R + (\tau^* - C(\tau^*))y_m n_m$, then $\tau = \bar{\tau}$, $t = 0$.*

2. If $(1 - \tau^*_\beta)y_m n_m < R + (\tau^*_\beta - C(\tau^*_\beta))y_m n_m$.

- *If $\mu \geq \mu_{threat^e_\beta}$, then $\tau = \tau^*_\beta$, $t = 0$ and there is no violence.*

- *If $\mu_{threat^e_\beta} \geq \mu > \mu_{scapegoat_\beta}$, then τ decreases as μ decreases and there is no violence.*

- *If $\mu_{scapegoat_\beta} > \mu$, then the poor majority attacks the rich minority. If $y_m n_m > R$, then $\tau = \bar{\tau}$, $t = 0$ while if $y_m n_m < R$, then $\tau = 0$, $t = \bar{t}$.*

We next highlight two further implications of Proposition 3. First, social integration always reduces the prospects of violence. For instance, we show in Appendix A that μ_{protec} and $\mu_{scapegoat_\beta}$ decreases in β. As both elites become more integrated, the local elite engages more often in altruistic protection and less often in instrumental scapegoating. We also show that this property actually holds for any level of integration f.

Corollary 4 *As social integration between elites increases, the prospect of violence decreases.*

Second, we find that social integration changes the optimal policies implemented to buy social peace. Without social integration, the government only cares about its monetary payoff. It then sets the revenue-maximizing tax rate and increases its transfer as μ decreases, see Proposition 2. With social integration, the government also cares about the monetary payoff of the economic elite. This makes a decrease in the tax rate more attractive than an increase in transfers, since lower tax yields higher payoffs for the economic elite.

Corollary 5 *Under social integration, the local elite prefers to reduce the tax rate rather than increase transfers in order to buy social peace.*

Our analysis seems to be in agreement with documented patterns. To illustrate, consider Madagascar, which contains no less than three minorities playing a disproportionate role in the economy: the descendants of 19th century Indian and Chinese migrants as well as recent Chinese migrants. The long-established Chinese community is considered to be quite integrated compared to the Indian community. As Fournet-Guérin (2009) points out: "Chinese are buried in the municipal cemetery; they do not live in a particular area; they are Catholic like most of the urban Malagasy population". By contrast, the Indian community remains a closed, endogamous community. Its members, also called "Karana", are strongly attached to their religions and traditions. And indeed, despite similar levels of wealth, the Chinese community is less subject to kidnappings and shop destructions than the Indian community (La Lettre de l'Océan Indien 2013).

Interestingly, the new wave of Chinese immigration induces very different reactions. Whereas the old Chinese community is well assimilated into broader Malagasy society, as shown by the high rate of mixed marriages and the high proportion of mixed race Sino-Malagasy who usually view themselves as Malagasy and bear Malagasy names (Fournet-Guérin 2006), the new Chinese are much less well-perceived. As Tremann (2013) explains: "although xenophobia against the Chinese in Madagascar is relatively low, the arrival of a new group of temporary Chinese immigrants, who clearly stand out owing to the fact that they live in urban areas and make their presence felt in economic spheres to do with consumerism, has led to a partial shift in the position of outlets for Malagasy frustrations, with the new Chinese now taking on the role of scapegoats" (p.11). According to her, "local anger towards the Chinese and the negative perceptions of their presence that underpin it are partly shaped by a lack of social interaction with the Malagasy" (p.11).

In South Asia, the Chinese are typically not well-integrated. However, Tailand constitutes an interesting exception. According to Chua (2004), "many Thai Chinese speak only Thai and consider themselves as Thai as their indigenous counterparts. Intermarriage rates between the Chinese and the indigenous majority are much higher than

elsewhere in South Asia" (p.179). And indeed, there is relatively little anti-Chinese animus in Thailand: "the fact remains that ethnic relations today between the Chinese and indigenous Thais in Thailand are remarkably civilized" (p.180). Overall, and consistent with our analysis, the level of social integration indeed seems to be a key determinant of violence targeted at a specific community.

V. Discussion and conclusion

In this paper, we develop a framework to study violence against rich ethnic minorities. The rent-seeking local elite can maintain its hold on power by sacrificing the rich minority to popular discontent. We show that such instrumental scapegoating may emerge for purely economic reasons and we provide a detailed analysis of its properties. In particular, we find that scapegoating is a last resort strategy and that it can lead to abrupt changes in the government's economic policies. We then consider some partial social integration between the two elites. We find that the elite's integration reduces violence and also has a first-order impact on economic policies.

Our analysis has, so far, relied on the assumption that an elite group subject to popular violence loses all its wealth and assets. While this assumption may be appropriate to help explain the most extreme scapegoating episodes, it cannot capture the low- and medium- level violence often observed. We relax this assumption in Appendix B. We assume instead that under violence, the targeted group only loses a fraction θ of its wealth. We show that our main results are robust. The three key domains uncovered in Propositions 2 and 3 are qualitatively unchanged. When μ is high, there is no violence and the political elite captures all rents. For intermediate values of μ, the elite buys social peace either through self-protective redistribution or altruistic protection. For low values of μ, the ethnic minority is subject to popular violence, possibly due to instrumental scapegoating.

A decrease in θ has some intuitive impacts: it reduces the ranges within which violence

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appears and reduces the transfers needed to buy social peace. It also has some more subtle effects. Under instrumental scapegoating, the political elite need not abandon its tax on the economic elite. And when the two elites are socially integrated, this tax rate decreases as θ decreases.

In future research, our analysis could be extended in various potentially interesting ways. As in Glaeser (2005) we could introduce competition between two groups for access to political power. This would likely yield rich strategic interactions between the rich minority and these two groups. For instance, the rich minority could decide to support one group against the other and scapegoating could appear as a way to win popular support. We could also introduce richer interactions between the poor majority and the rich minority, for instance through jobs in the formal sector. We could develop a dynamic version of the model and endogenize the level of integration between elites. Some interesting trade-offs appear in a dynamic framework. For the political elite, the short-run political benefits of sacrificing the economic elite come with long-term costs. If the economic elite leaves the country, this will likely lead to a significant deterioration of the economic situation. The question of evolving integration between elites also becomes key. In particular, integration may entail a trade-off for the ethnic minority. Whereas, as shown in Section 4, integration decreases the likelihood of violence, it may diminish the ability to leave the country and resettle elsewhere. A community with past experience of violence may therefore decide to maintain its cohesiveness and deliberately avoid integration, at the risk of increasing its likelihood of experiencing future scapegoating episodes.

Appendix A: Proofs

Proof of Proposition 2

The elite maximizes its payoff π_e under the constraint: $\max(\pi_p(N), \pi_p(V_m)) \geq \pi_p(V_e)$.

When the minority is richer after tax τ^* than the local elite, the government always chooses the policies that maximize its payoff and is never attacked by the people since $(1-\tau^*)y_m n_m \geq R + (\tau^* - C(\tau^*))y_m n_m \Rightarrow \forall \mu, \pi_p(V_m|\mu, \tau^*, 0) \geq \pi_p(V_e|\mu, \tau^*)$. For μ such that $\pi_p(N|\tau^*, 0) \geq \pi_p(V_m|\mu, \tau^*, 0) \Leftrightarrow \mu \geq \mu_{threat^m} = (1-\tau^*)y_m n_m / [(1-\tau^*)y_m n_m + y_p n_p]$, the people remain pacific; otherwise they attack the minority.

When the minority is poorer after tax τ^* than the local elite, three domains emerge. For μ such that $\pi_p(N|\tau^*, 0) \geq \pi_p(V_e|\mu, \tau^*) \Leftrightarrow \mu \geq \mu_{threat^e} = [R + (\tau^* - C(\tau^*))y_m n_m] / [R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]$, the government chooses $(\tau, t) = (\tau^*, 0)$ and there is no violence; otherwise, the local elite needs to modify its policies to avoid violence.

The government may use *self-protective redistribution*, i.e. maximize its payoff under the contraints that the people is indifferent between remaining pacific and attacking them, formally $\pi_p(N|\tau, t) = \pi_p(V_e|\mu, \tau)$ and that the people prefer remaining pacific rather than attacking the minority, formally $\pi_p(N|\tau, t) \geq \pi_p(V_m|\mu, \tau, t)$. The first constraint leads the elite to keep the tax rate at τ^* and set the transfer $\hat{t} = (1-\mu)[R + (\tau^* - C(\tau^*))y_m n_m]/n_p - \mu y_p$, which is continuous at μ_{threat^e} $(\hat{t}(\mu_{threat^e}) = 0)$ and increases as μ decreases. The second constraint is respected for $\pi_p(N|\tau^*, \hat{t}) \geq \pi_p(V_m|\mu, \tau^*, \hat{t}) \Leftrightarrow \mu \geq \mu_1 = (1-\tau^*)y_m n_m / [R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]$. The payoff of the elite, $\pi_e(N|\tau^*, \hat{t}) = \mu[R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]/n_e$, decreases as μ decreases.

Alternatively, the government may use *instrumental scapegoating*, i.e. maximize its payoff under the constraints that the people is indifferent between attacking them or attacking the minority, formally $\pi_p(V_m|\mu, \tau, t) = \pi_p(V_e|\mu, \tau)$ and that the people prefer attacking the minority rather than remaining pacific, formally $\pi_p(V_m|\mu, \tau, t) \geq \pi_p(N|\tau, t)$. The first constraint yields $(1-\mu)(y_p + \frac{1}{n_p}(R + (\tau - C(\tau))y_m n_m)) = $

$(1-\mu)(y_p + t + \frac{1}{n_p}(1-\tau)y_m n_m) \Leftrightarrow t = (R + (\tau - C(\tau))y_m n_m - (1-\tau)y_m n_m)/n_p.$

Two cases have to be distinguished: if $y_m n_m \geq R$, $\bar{\tau}^{18}$ exists; therefore the local elite chooses $(\tau, t) = (\bar{\tau}, 0)$ and gets a payoff $\pi_e(V_m|\bar{\tau}, 0) = [R + (\bar{\tau} - C(\bar{\tau}))y_m n_m]/n_e$. If $R > y_m n_m$, they choose $(\tau, t) = (0, \bar{t})$ with $\bar{t} = (R - y_m n_m)/n_p$ and receive a payoff $\pi_e(V_m|0, \bar{t}) = y_m n_m/n_e$. The second constraint is respected for $\pi_p(V_m|\mu, \bar{\tau}, 0) \geq \pi_p(N|\mu, \bar{\tau}, 0) \Leftrightarrow \mu \leq \mu_2 = (1-\bar{\tau})y_m n_m/[(1-\bar{\tau})y_m n_m + y_p n_p]$ if $y_m n_m \geq R$, (resp. $\mu \leq \mu_{2'} = y_m n_m/(R + y_p n_p)$ if $y_m n_m < R$).

The local elite chooses *self-protective impoverishment* for μ such that $\pi_e(N|\tau^*, \hat{t}(\mu)) \geq \pi_e(V_m|\bar{\tau}, 0) \Leftrightarrow \mu \geq \mu_{scapegoat} = (1-\bar{\tau})y_m n_m/[R+(\tau^*-C(\tau^*))y_m n_m+y_p n_p]$ if $y_m n_m \geq R$ (resp. $\mu \geq \mu_{scapegoat'} = y_m n_m/[R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]$ if $R > y_m n_m$).

Since we have $\mu_1 < \mu_{scapegoat} < \mu_2$, and $\mu_1 < \mu_{scapegoat'} < \mu_{2'}$, the second constraints of the maximization problems never bind.

Note that the transfer is discontinuous at $\mu_{scapegoat'}$:

Proof: $\bar{t} = \hat{t}(\mu) \Leftrightarrow \mu = [y_m n_m+(\tau^*-C(\tau^*))y_m n_m]/[R+(\tau^*-C(\tau^*))y_m n_m+y_p n_p] \equiv \mu_3$. *As $\mu_{scapegoat'} < \mu_3$, and $\hat{t}'(\mu) < 0$, therefore $\bar{t} < \hat{t}(\mu_{scapegoat'})$.* □

Note also that all the thresholds decrease as y_p or n_p increase.

And $\partial \mu_{threat^e}/\partial R = y_p n_p/[R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]^2 > 0$

$\partial \mu_{threat^e}/\partial y_m = (\tau^* - C(\tau^*))n_m y_p n_p/[R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]^2 > 0$

$\partial \mu_{threat^m}/\partial y_m = (1 - \tau^*)n_m y_p n_p/[(1 - \tau^*)y_m n_m + y_p n_p]^2 > 0$

$\partial \mu_{scapegoat'}/\partial y_m = (R + y_p n_p)n_m/[R + (\tau^* - C(\tau^*))y_m n_m + y_p n_p]^2 > 0$

$\partial \mu_{scapegoat'}/\partial R < 0$ (obvious).

Proof of Proposition 3

The local elite chooses which strategy brings more utility, between the maximization of its utility u_e under the constraint: $u_p(N) \geq \max(u_p(V_m), u_p(V_e))$ and the maximization of its payoff π_e under the constraint: $u_p(V_m) \geq \max(u_p(N), u_p(V_e))$.

With partial integration, three domains emerge, even in the configuration where the

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[18]$\bar{\tau}$ is such that $R + (\tau - C(\tau))y_m n_m = (1 - \tau)y_m n_m$

minority is richer after tax τ_β^* than the elite.

For μ high enough, the local elite chooses $(\tau_\beta^*, 0)$ and the people remain pacific. This is an equilibrium for $u_p(N|\tau_\beta^*, 0) \geq u_p(V_m|\mu, \tau_\beta^*, 0) \Leftrightarrow \mu \geq \mu_{threat_\beta^m} = (1 - \tau_\beta^*)y_m n_m/[(1 - \tau_\beta^*)y_m n_m + y_p n_p]$, if the minority is richer after tax τ_β^* than the local elite (resp. $u_p(N|\tau_\beta^*, 0) \geq u_p(V_e|\mu, \tau_\beta^*) \Leftrightarrow \mu \geq \mu_{threat_\beta^e} = [R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m]/[R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m + y_p n_p]$ if the minority is poorer).

We have $\partial \mu_{threat_\beta^e}/\partial R = y_p n_p/[R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m + y_p n_p]^2 > 0$

$\partial \mu_{threat_\beta^e}/\partial y_m = (\tau_\beta^* - C(\tau_\beta^*))n_m y_p n_p/[R + (\tau_\beta^* - C(\tau_\beta^*))y_m n_m + y_p n_p]^2 > 0$

$\partial \mu_{threat_\beta^m}/\partial y_m = (1 - \tau_\beta^*)n_m y_p n_p/[(1 - \tau_\beta^*)y_m n_m + y_p n_p]^2 > 0$

When μ falls below these thresholds, the local elite choose whether to buy social peace or let the people attack the minority.

When the minority is richer after tax τ_β^* than the local elite, the local elite may provide an *altruistic protection* to the minority, i.e maximize its utility under the constraints that the people is indifferent between remaining pacific rather and attacking the minority, formally $u_p(N|\tau, t) = u_p(V_m|\mu, \tau, t)$ and that the people prefer remaining pacific rather than attacking the local elite, formally $u_p(N|\tau, t) \geq u_p(V_e|\mu, \tau)$.

The first constraint leads the local elite to choose $(\tau, t) = (\tilde{\tau}_1, 0)$ with $\tilde{\tau}_1$ such that $(1 - \tau)y_m n_m/[(1 - \tau)y_m n_m + y_p n_p] = \mu$, or $(\tau, t) = (\tilde{\tau}_2, \tilde{t}_2)$ with $\tilde{\tau}_2$ such that $C'(\tau) = 1/\mu - \beta$ and $\tilde{t}_2 = (1/\mu - 1)(1 - \tilde{\tau}_2)y_m n_m/n_p - y_p$.

The local elite always choose first $(\tilde{\tau}_1, 0)$, as $\tilde{t}_2$ is negative at $\mu_{threat_\beta^m}$.

Proof: at $\mu_{threat_\beta^m}$, $\tilde{t}_2 \geq 0 \Leftrightarrow \tilde{\tau}_2(\mu_{threat_\beta^m}) \leq \tau_\beta^*$. However, as $\mu_{threat_\beta^m} < 1$, we have $\tilde{\tau}_2(\mu_{threat_\beta^m}) > \tau_\beta^*$, indeed $\tilde{t}_2 < 0$ at $\mu_{threat_\beta^m}$. □

The tax rate is continuous $(\tilde{\tau}_1(\mu_{threat_\beta^m}) = \tau_\beta^*)$ and $\tilde{\tau}_1$ is increasing as μ decreases.

Proof: we derive $(1 - \tilde{\tau}_1)y_m n_m = \mu[(1 - \tilde{\tau}_1)y_m n_m + y_p n_p]$ with respect to μ and we get $(\mu - 1)\tilde{\tau}_1'(\mu) = [(1 - \tilde{\tau}_1)y_m n_m + y_p n_p]/(y_m n_m) \Rightarrow \tilde{\tau}_1'(\mu) < 0$. □

Obviously, $\tilde{\tau}_2$ is increasing as μ decreases.

The second constraint can be binding, in which case the local elite has to choose (τ, t) such that $u_p(N|\tau, t) = u_p(V_m|\mu, \tau, t) = u_p(V_e|\mu, \tau)$: we call this *global protective impoverishment*.

When the minority is poorer after tax τ_β^* than the local elite, the local elite may use *self protective redistribution*, which is the same strategy as in Proposition 2 except that payoffs are replaced by utilities. The first constraint leads the local elite to choose $(\tau, t) = (\hat{\tau}_1, 0)$ with $\hat{\tau}_1$ such that $[R + (\tau - C(\tau))y_m n_m]/[R + (\tau - C(\tau))y_m n_m + y_p n_p] = \mu$, or $(\tau, t) = (\hat{\tau}_2, \hat{t}_2)$ with $\hat{\tau}_2$ such that $C'(\tau) = 1 - \beta/\mu$ and $\hat{t}_2 = (1 - \mu)[R + (\hat{\tau}_2 - C(\hat{\tau}_2))y_m n_m]/n_p - \mu y_p$.

The local elite always choose first $(\hat{\tau}_1, 0)$, as $\hat{t}_2$ is negative at $\mu_{threat_\beta^e}$.

Proof: $\hat{t}_2 \geq 0 \Leftrightarrow \hat{\tau}_2(\mu_{threat_\beta^e}) - C(\hat{\tau}_2(\mu_{threat_\beta^e})) \geq \tau_\beta^* - C(\tau_\beta^*)$. However, as $\mu_{threat_\beta^e} < 1$, we have $\hat{\tau}_2(\mu_{threat_\beta^e}) < \tau_\beta^* < \tau^*$, and because we know that the function $\tau - C(\tau)$ is concave and reaches its maximum for τ^*, we necessarily have $\hat{\tau}_2(\mu_{threat_\beta^e}) - C(\hat{\tau}_2(\mu_{threat_\beta^e})) < \tau_\beta^* - C(\tau_\beta^*)$. Indeed $\hat{t}_2 < 0$ at $\mu_{threat_\beta^e}$. $\square$

The tax rate is continuous $(\hat{\tau}_1(\mu_{threat_\beta^e}) = \tau_\beta^*)$ and $\hat{\tau}_1$ is decreasing as μ decreases.

Proof: we derive $R + (\hat{\tau}_1 - C(\hat{\tau}_1))y_m n_m = \mu[R + (\hat{\tau}_1 - C(\hat{\tau}_1))y_m n_m + y_p n_p]$ with respect to μ and we get $(1 - \mu)\hat{\tau}_1'(\mu)(1 - C'(\hat{\tau}_1)) = [R + (\hat{\tau}_1 - C(\hat{\tau}_1))y_m n_m + y_p n_p]/(y_m n_m) \Rightarrow \hat{\tau}_1'(\mu) > 0$ since $C'(\hat{\tau}_1) < 1$ as $\hat{\tau}_1 < \tau^*$. $\square$

Obviously, $\hat{\tau}_2$ is decreasing as μ decreases.

The second constraint can bind such that the local elite has to choose *global protective impoverishment*.

The elite may also decide to *let the people attack the minority* or use *instrumental scapegoating*, i.e. maximize its utility under the constraint that the people prefer attacking the minority rather than remaining pacific or attacking the elite.

When the minority is richer after tax τ_β^* than the local elite, two situations emerge. If the minority is richer after tax τ^* than the local elite, the constraint that the people prefer attacking the minority rather than the local elite when they use their most preferred policy $(\tau^*, 0)$ is not binding. The local elite chooses $(\tau, t) = (\tau^*, 0)$ and they get a utility $u_e(V_m | \tau^*, 0) = [R + (\tau^* - C(\tau^*))y_m n_m]/n_e$. When the minority is poorer after tax τ^*, the constraint is binding and the local elite chooses τ and t which maximize their utility and such that $u_p(V_m | \mu, \tau, t) = u_p(V_e | \mu, \tau)$: the local elite chooses $(\tau, t) = (\bar{\tau}, 0)$ and gets a utility $u_e(V_m | \bar{\tau}, 0) = [R + (\bar{\tau} - C(\bar{\tau}))y_m n_m]/n_e$.

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When the minority is poorer after tax τ_β^* than the local elite, the policies and utilities of the local elite for *instrumental scapegoating* are the same as in Proposition 2.

The local elite never use *global protective impoverishment* (GPI) for a β low enough.
Proof: GPI gives to the elite a utility $u_e(N|\tau_{gpi}, t_{gpi}) = (1+\beta)(1-\tau_{gpi})y_m n_m/n_e$. GPI is not defined for tax rates lower than $\bar{\tau}$, therefore we necessarily have $\tau_{gpi} \geq \bar{\tau}$. Non-protection and instrumental scapegoating give a constant utility to the elite, and for every configuration we have $u_e(N|\tau_{gpi}, t_{gpi}) < u_e(V_m|\tau, t)$ when $\beta \to 0$. Indeed there must exist a β for which the elite never uses GPI. $\square$

There exist a threshold μ_{protec}, when the minority is richer after tax τ_β^*, and $\mu_{scapegoat_\beta}$ when the minority is poorer, that separates peace to violence against the minority.
Proof: When buying social peace, either through altruistic protection or self-protective redistribution, the problem of the elite is to choose τ and t that maximize $u_e = \pi_e + \beta\pi_m$ under the constraint $\max(u_p(V_e), u_p(V_m)) \leq u_p(N)$. Only $u_p(V_e)$ and $u_p(V_m)$ depend on μ: as μ decreases, $\max(u_p(V_e), u_p(V_m))$ increases, so the set (τ, t) satisfying the constraint shrinks, and therefore the maximum lowers and $u_e(N|\tau, t)$ decreases. However $u_e(V_m|\tau, t)$ is independent of μ. We have that if the optimal policy of the elite is (τ^*, t^*) for μ and $(\tau^{*'}, t^{*'})$ for $\mu' < \mu$, and if $x(\tau^*, t^*) = V_m$, then $x(\tau^{*'}, t^{*'}) = V_m$. Indeed $\exists \bar{\mu}$ such that $\mu < \bar{\mu} \Rightarrow V_m$ and $\mu > \bar{\mu} \Rightarrow N$. $\square$

These thresholds decrease as β increases.
*Proof: as global protective impoverishment gives a lower utility to the elite than altruistic protection and self-protective redistribution, μ_{protec} and $\mu_{scapegoat_\beta}$ are bounded from below by the threshold μ_{gpi} for which the elite is indifferent between global protective impoverishment and no protection or instrumental scapegoating.
$u_e(N|\tau_{gpi}, t_{gpi})$ increases as β increases while $u_e(V_m|\tau^*, 0)$, $u_e(V_m|\bar{\tau}, 0)$ and $u_e(V_m|0, \bar{t})$ are constant. Indeed, μ_{gpi} decreases as β increases.* $\square$

In general, higher integration reduces the prospects of violence.
Proof: we prove that if the maximization problem of the elite leads to non violence for a given β, it cannot lead to violence against the minority for a higher β.

Suppose we have N for β' and V_m for $\beta \geq \beta'$. Let (τ^*, t^*) be solution to β.

$\beta \geq \beta', \quad \forall(\tau, t), \quad (\pi_e + \beta\pi_m)(\tau, t) \geq (\pi_e + \beta'\pi_m)(\tau, t)$, then

$\max \pi_e + \beta\pi_m \geq \max \pi_e + \beta'\pi_m \Rightarrow \pi_e(\tau^*, t^*) \geq \pi_e(\tau^*, t^*) + \beta'\pi_m(\tau^*, t^*)$.

We have a contradiction. $\square$

Appendix B: Extension with Partial Violence

No rich ethnic minority

In case of violence against the elite, payoffs become:

$\pi_e(V_e) = (1 - \theta)R/n_e$ and $\pi_p(V_e|\mu) = (1 - \mu)(y_p + \theta R/n_p)$.

The domains uncovered in Proposition 1 are qualitatively unchanged.

We find that $\mu_{threatPV} = \theta R/(\theta R + y_p n_p) < \mu_{threat}$ and

$\mu_{exilePV} = [\pi_0 n_e - (1 - \theta)R]/(\theta R + y_p n_p) < \mu_{exile}$

Moreover, $\hat{t}_{PV} = (1 - \mu)\theta R/n_p - \mu y_p$.

Separate elites

In case of violence against the local elite, payoffs become:

$\pi_e(V_e|\tau) = (1 - \theta)\left[R + (\tau - C(\tau))y_m n_m\right]/n_e$ and

$\pi_p(V_e|\mu, \tau) = (1 - \mu)\left[y_p + \theta[R + (\tau - C(\tau))y_m n_m]/n_p\right]$ with $\pi_m(V_e|\tau)$ unchanged.

In case of violence against the minority, payoffs become: $\pi_m(V_m|\tau, t) = (1 - \theta)(1 - \tau)y_m$ and $\pi_p(V_m|\mu, \tau, t) = (1 - \mu)\left[y_p + t + \theta(1 - \tau)y_m n_m/n_p\right]$ with $\pi_e(V_m|\tau, t)$ unchanged.

The domains uncovered in Proposition 2 are qualitatively unchanged.

We find that $\mu_{threat^e_{PV}} = \theta[R + (\tau^* - C(\tau^*))y_m n_m]/[\theta(R + (\tau^* - C(\tau^*))y_m n_m) + y_p n_p] < \mu_{threat^e}$ and $\mu_{threat^m_{PV}} = \theta(1 - \tau^*)y_m n_m/[\theta(1 - \tau^*)y_m n_m + y_p n_p] < \mu_{threat^m}$.

We find $\mu_{scapegoatPV} = ((1 - \bar{\tau})y_m n_m - (1 - \theta)[R + (\tau^* - C(\tau^*))y_m n_m])/(\theta[R + (\tau^* - C(\tau^*))y_m n_m] + y_p n_p)$ and $\mu_{scapegoat'PV} = [\theta(1 - \tau_{V_m})y_m n_m - (1 - \theta)[(\tau^* - C(\tau^*)) - (\tau_{V_m} - C(\tau_{V_m}))]y_m n_m]/(\theta[R + (\tau^* - C(\tau^*))y_m n_m] + y_p n_p)$ and we have $\mu_{scapegoatPV} < \mu_{scapegoat}$ and $\mu_{scapegoat'PV} < \mu_{scapegoat'}$.

Moreover, we have $\mu_{1PV} = \theta(1-\tau^*)y_m n_m/(\theta[R+(\tau^*-C(\tau^*))y_m n_m]+y_p n_p)$, $\mu_{2PV} = \theta(1-\bar{\tau})y_m n_m/[\theta(1-\bar{\tau})y_m n_m + y_p n_p]$ and $\mu_{2'PV} = \theta(1-\tau_{V_m})y_m n_m/(\theta[R+(\tau_{V_m}-C(\tau_{V_m}))y_m n_m]+y_p n_p)$.

We always have $\mu_{1PV} < \mu_{scapegoatPV}$, $\mu_{2PV} > \mu_{scapegoatPV}$ and $\mu_{2'PV} > \mu_{scapegoat'PV}$; while $\mu_{1PV} < \mu_{scapegoat'PV}$ for θ higher than a certain threshold.

$\hat{t}_{PV} = (1-\mu)\theta[R+(\tau^*-C(\tau^*))y_m n_m]/n_p - \mu y_p$.

One difference from the benchmark analysis is as follows. About *instrumental scapegoating*, let us define τ_{V_m} such that $C'(\tau) = 1 - \theta/(1-\theta)$.

The policy chosen is: $(\bar{\tau}, 0)$ if $(1-\tau_{V_m})y_m n_m \geq R + (\tau_{V_m} - C(\tau_{V_m}))y_m n_m$; and (τ_{V_m}, t_{V_m}), with $t_{V_m} = \theta[R+(\tau-C(\tau))y_m n_m - (1-\tau)y_m n_m]/n_p$ if $(1-\tau_{V_m})y_m n_m < R + (\tau_{V_m} - C(\tau_{V_m}))y_m n_m$. Note that $\tau_{V_m} \leq \tau^*$ and τ_{V_m} decreases as θ increases while t_{V_m} increases as θ increases.

Partial integration

The local elite's utility in case of violence becomes: $u_e(V_m|\tau,t) = [R - n_p t + (\tau(1-\beta(1-\theta)) - C(\tau) + \beta(1-\theta))y_m n_m]/n_e$ and $u_e(V_e|\tau) = [(1-\theta)R + (\tau(1-\beta-\theta) - (1-\theta)C(\tau) + \beta)y_m n_m]/n_e$, while its utility in case of peace is unaltered.

The domains uncovered in Proposition 3 are qualitatively unchanged.

We find that $\mu_{threat^e_{\beta PV}} = \theta[R+(\tau^*_\beta - C(\tau^*_\beta))y_m n_m]/[\theta(R+(\tau^*_\beta - C(\tau^*)_\beta)y_m n_m)+y_p n_p] < \mu_{threat^e_\beta}$ and $\mu_{threat^m_{\beta PV}} = \theta(1-\tau^*_\beta)y_m n_m/[\theta(1-\tau^*_\beta)y_m n_m + y_p n_p] < \mu_{threat^m_\beta}$.

The policy chosen for *altruistic protection* is: first $(\tilde{\tau}_{1PV}, 0)$ with $\tilde{\tau}_{1PV}$ such that $\theta(1-\tau)y_m n_m/[\theta(1-\tau)y_m n_m + y_p n_p] = \mu$, and then $(\tilde{\tau}_{2PV}, \tilde{t}_{2PV})$ with $\tilde{\tau}_{2PV}$ such that $C'(\tau) = \theta/\mu - \beta + (1-\theta)$ and $\tilde{t}_{2PV} = (1/\mu - 1)\theta(1-\tilde{\tau}_{2PV})y_m n_m/n_p - y_p$.

Note that $\tilde{\tau}_{1PV}$ and $\tilde{\tau}_{2PV}$ increase as θ increases.

The policy chosen for *self-protective redistribution* is: first $(\hat{\tau}_{1PV}, 0)$ with $\hat{\tau}_{1PV}$ such that $\theta[R+(\tau-C(\tau))y_m n_m]/(\theta[R+(\tau-C(\tau))y_m n_m]+y_p n_p) = \mu$, and then $(\hat{\tau}_{2PV}, \hat{t}_{2PV})$ with $\hat{\tau}_{2PV}$ such that $C'(\tau) = 1 - \beta/[1-\theta(1-\mu)]$ and
$\hat{t}_{2PV} = (1-\mu)\theta[R+(\tau-C(\tau))y_m n_m]/n_p - \mu y_p$.

Note that $\hat{\tau}_{1PV}$ and $\hat{\tau}_{2PV}$ increase as θ increases.

The policy chosen for *no protection* and for *instrumental scapegoating* is slightly different from the benchmark. Here, the most preferred policy of the local elite in case of violence against the minority is: $(\tau^*_{\beta PV}, 0)$ with $\tau^*_{\beta PV}$ such that $C'(\tau) = 1 - \beta(1 - \theta)$. Note $\tau^*_\beta \leq \tau^*_{\beta PV} \leq \tau^*$ and $\tau^*_{\beta PV}$ increases as θ increases.

If the minority is richer after tax $\tau^*_{\beta PV}$ than the elite, they choose $(\tau^*_{\beta PV}, 0)$.

While if the minority is poorer, the local elite max $u_e(V_m)$ by choosing τ and t such that that $u_p(V_m|\mu, \tau, t) = u_p(V_e|\mu, \tau) \Leftrightarrow t_{\beta V_m} = \theta[R + (\tau - C(\tau))y_m n_m - (1 - \tau)y_m n_m]/n_p$. The constraint that $t_{\beta V_m} \geq 0$ leads to the following policy: we define $\tau_{\beta V_m}$ such that $C'(\tau) = 1 - \beta - \theta/(1 - \theta)$, which is the optimal tax rate of the local elite in case of violence against the minority after integrating the constraint $t_{\beta V_m}$ within their objective function. If $(1 - \tau_{\beta V_m})y_m n_m \geq R + (\tau_{\beta V_m} - C(\tau_{\beta V_m}))y_m n_m$, the local elite chooses $(\bar{\tau}, 0)$, while if $(1 - \tau_{\beta V_m})y_m n_m < R + (\tau_{\beta V_m} - C(\tau_{\beta V_m}))y_m n_m$, they choose $(\tau_{\beta V_m}, t_{\beta V_m})$. Note that $\tau_{\beta V_m}$ decreases as θ increases and $t_{\beta V_m}$ increases as θ increases.

The local elite may use *global protective impoverishment strategy* and we also find that for β small enough, the local elite never uses it, provided that θ is not too low.

As in the benchmark analysis, there exist thresholds $\mu_{protectPV}$ and $\mu_{scapegoat_\beta PV}$ at which the local elite decides to let the minority be attacked by the people. The impact of θ on these thresholds is ambiguous.

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