Model referenced with footnote 35 in “Oil, Nontax Revenue, and the Redistributional Foundations of Regime Stability”, *International Organization* 63(107-38) 
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To see the relationship between non-tax revenue and citizens’ taxation preferences, start by defining an individual’s utility as

\[ U^i = z^i + K(S) \]  

(1)

where \( U^i \) is the utility of an individual, \( z^i \) is her consumption, and \( S \) is per capita government spending. \( K(\cdot) \) is a function such that \( K: [0, \infty] \rightarrow \mathbb{R}_+ \), where \( K(0) = 0 \) so that there is no utility gained from no expenditure; \( K'(\cdot) > 0 \), so utility is increasing in the level of spending; and \( K''(\cdot) < 0 \) to capture the diminishing returns to government size due to the economic distortions it can create.\(^1\) Consumption for an individual is assumed to be equal to:

\[ z^i = (1-\tau)y^i \]  

(2)

where \( \tau \) is a proportional income tax levied on all citizens and \( y^i \) is individual \( i \)'s pre-tax income.

Government spending is assumed to be financed by tax revenues and other non-tax resources. It therefore equals:

\[ S = \frac{1}{n} \left[ \sum_{i=1}^{n} \tau y^i \right] + N = \bar{y} + N, \]  

(3)

where \( n \) is the number of people in the society, \( \bar{y} \) is the average income in the economy, and \( N \) is the per capita amount of non-tax revenue. It is important to note here that the tax system in this model is progressive, indicating that the tax rate is a measure of redistribution. This can be seen by noting that every individual receives the same benefit from government spending, while the

amount of tax paid by individual $i$ ($\tau y^i$) increases as the individual’s income increases. Models like this are often used to predict levels of redistribution.\(^2\)

Substituting equations (2) and (3) into (1) yields the indirect utility function:

$$V^i = (1 - \tau)y^i + K(\bar{\sigma} + N)$$

The conditions on $K(\cdot)$ imply that $V^i$ is a strictly concave function, which is a sufficient condition for preferences to be single-peaked.\(^3\) At this point, without loss of generality, I use an example of a strictly concave function for the sake of presentation. I define $V^i$ as:

$$V^i = (1 - \tau)y^i + \ln(\bar{\sigma} + N + 1) \quad (4)$$

I follow Acemoglu and Robinson and define the incomes of the citizens ($y^c$) and elites ($y^e$) as follows:\(^4\)

$$y^e = \frac{\theta y}{\lambda n} = \frac{\theta y}{\lambda} \quad (5)$$

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\(^3\) It should also be noted that the construction of the $K(\cdot)$ function implies that spending financed by $\bar{\sigma}$ and $N$ have exactly the same effect on individual utility. This may not be true. However, any functional form would work as long as $\frac{\partial^2 K}{\partial \bar{\sigma} \partial N}$ is less than zero.

\(^4\) Acemoglu and Robinson (2006: Chapter 9) show that these expressions can be derived from a standard Cobb-Douglass production function. In addition, while the expressions enter exogenously into the model, any disincentives to work caused by taxation are incorporated by Acemoglu and Robinson into a deadweight cost function. The $K(\cdot)$ function in this paper can be seen as incorporating such deadweight costs.
Here, $\lambda$ is the share of citizens in the population, and $\theta$ is their share of the economy. Intuitively, the income of a citizen can be thought of as the share of the economy accruing to citizens, divided by the number of those citizens. Note that an increase in $\theta$ represents a fall in inequality, and that since

\[ y^e < \bar{y} < y_e, \]  

(7)

\[ \frac{\theta \bar{y}}{\lambda} < \frac{(1-\theta) \bar{y}}{1-\lambda}, \]  

(8)

which implies that $\theta < \lambda$.

I can now plug equations (5) and (6) into (4) to attain the indirect utility function of elites and citizens in society:

\[ V^e = (1-\tau) \frac{(1-\theta) \bar{y}}{(1-\lambda)} + \ln(\bar{y} + N + 1) \]  

(9)

\[ V^c = (1-\tau) \frac{\theta \bar{y}}{\lambda} + \ln(\bar{y} + N + 1) \]  

(10)

To find the preferred tax rate of the elite, I need to solve equation (9) through unconstrained maximization. Taking the derivative of equation (9) with respect to $\tau$ yields:

\[ \tau^e = \frac{1}{\bar{y}} \frac{1-\lambda}{1-\theta} - N - 1. \]  

(11)

Because $\theta < \lambda$, $\tau^e$ is always less than zero. In other words, elites will never prefer a positive tax rate, and since tax rates are assumed to be nonnegative, the preferred tax rate of the elite is zero. This is in line with the characteristics of the theoretical approach discussed in the main text.

Proceeding similarly with equation (10) to find the preferred tax rate of citizens, we see that:
\[ \tau^c = \left( \frac{1}{y} \right) \left( \frac{\lambda}{\theta} - N - 1 \right). \]  

(12)

This equation indicates that non-tax revenue tends to decrease the preferred tax rate of citizens.

