Dictators (Leviathan II)

Public choice and Methodological individualism
        Assume that individuals are maximizing their own objective functions
                And that they are the same people when voting as when consuming

        Can this assumption work when discussing dictators?
                The predatory state vs. the contract state (North and econ. History)

        It can, if we model the dictator as maximizing something
                This does not imply, or preclude, a "benevolent despot"
                        Example: Singapore and Burma

Origins of dictatorships
        Mancur Olsen and the "roving bandit"
        In the state of nature, no laws, or property rights
                The hunter-gatherer band of 30-50
        This was the largest practical unit of society
                Consensus decision making
                        The small size mitigated against the tragedy of the commons
                problems associated with politics
                              It was easy to monitor defection/shirking
                              Decision making costs were low
                              Private costs of shirking were relatively high

        Warfare between bands was endemic, so no property that wasn't portable
                Even after the first agricultural revolution, this problem persisted

The "roving bandit"
        Society was preyed on by roving bandits – leaders with a group of followers
                Who plundered and stole all that they could
                        Which was very little, for wealth was quite limited
         In this sort of world, there are no public goods. And the difficulty of collectively providing the public goods is likewise the difficulty of providing property rights, laws, etc. – the framework for the provision of public goods

        In this case, the public good can only be provided by an entrepreneur.

The "stationary bandit".
        An entrepreneur steps forwards and privately creates the institutions that allow for public goods.
        By providing the institutions, and the public goods, society's income increases
        And the entrepreneur now plunders it……
                But not completely -- he has internalized the externality

The stationary bandit protects against roving bandits, and has an incentive to provide public goods, though his incentives are not the same as his subjects incentives……

A model of stationary bandits (Dictators)

Y = Total income of society
G = Public goods, that increase Y
So Y = Y(G), where $dY/dG > 0$ and $d^2Y/dG^2 < 0$

To finance G, there needs to be a proportional tax on income, t
t = proportional tax on Y

This causes a disincentive effect on income, however (laffer curve) – as t rises, the amount of effort in society falls (or is shifted to untaxable activities). To account for this, assume a constant effect of the tax rate on income (constant elasticity) of ή. So

$Y_r = Y(1 - ήt)$ Realized income Y_r goes down as t rises….

$tY_r = G$ t will be function of G, since t is used to pay for G (a budget constraint)…..

Assume now two types of dictators, benevolent despots (B) and Dictators (D)

The benevolent despot maximizes

$B = Y(1 - ήt) – G$

B is what our benevolent despot desires, if we maximize it for G we get

$dB/dG = dY/dG(1 - ήt) – Yή(dt/dG) – 1 = 0$

The first term is the marginal gain from increasing public goods. More G means more income. The second term is the decline in income due to the disincentive effect of taxes on income. The third term (-1) is the cost of G, i.e. the direct cost of purchasing G

B= Y(1-tx) - G
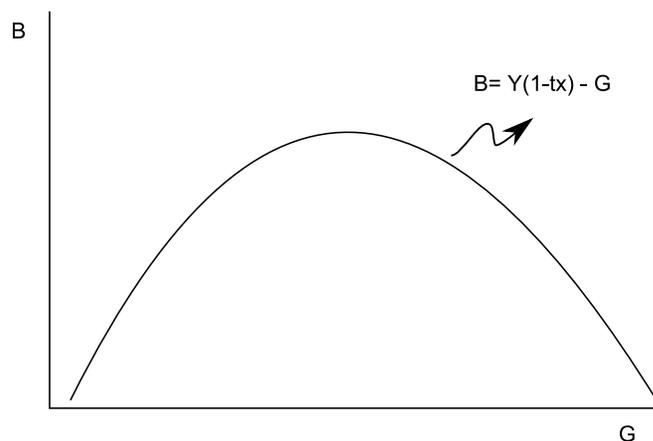
The above graph is a much simpler way to visualize the issue.

Our benevolent despot provides public goods G up to the point where the marginal benefit an additional unit of the public good is equal to the cost of the good. The cost of the good is twofold, the actual cost of paying for it $(dY/dG(1- ήt)$ and indirect costs associated with our not working to escape the tax burden, the disincentive effect $Yή(dt/dG)$. DON'T WORRY ABOUT THE MATH, THE ABOVE GRAPH USES THE ORIGINAL OBJECTIVE FUNCTION, AND GIVES THE INTUITION WELL, THOUGH NOT THE SOLUTION.

The above condition holds if
       We have an absolute dictator who loves us, he does not consume the taxes himself
       We have a voting majority that is everybody (unanimity), if everybody is part of the majority, there is no opportunity to enact transfers from minorities to ourselves
       We have a voting majority which is smaller than unanimity, but it either fears becoming part of the minority (the "veil of ignorance"), or it is benevolent and fair.

What about non-benevolent despots, i.e. Dictators?
       Dictators are interested in maximizing their own wealth, not in maximizing society's wealth – though increasing societies wealth *may* be in their own interests

This gives us a different budget constraint

$tYr = G + C$, where C is consumption (palaces, helicopters, harems, etc.)

the dictator must now fund both public goods, like roads, and private consumption for himself, like Harems, from the tax revenue. Additionally, remember that any tax revenue spent on roads, is revenue NOT spent on his own personal gain.

and thus we get a different objective function;

$D = Y(1- ήt) – G – C$

For simplicity, assume that dictator maximizes public wealth as per the earlier example, but then in addition imposes an additional tax to fund his own pleasure. Recalling that our constraint is $tYr = G + C$, and we can substitute that in for C. In other words, we substitute in $t(Yr)$ for Y in our original equation. This gives us…

$D = tY(1- ήt) – G$ or

 Solving for dD/dG and dD/dt, we get

$t (dY/dG) – 1 = 0$ and

Y - 2ήtY = 0

Or

dY/dG = 1/t
t = 1/2ή

The dictator sets the tax rate and G in order to optimize his income C.   It turns out the solution this problem is very complicated ….   But returning to our objective functions
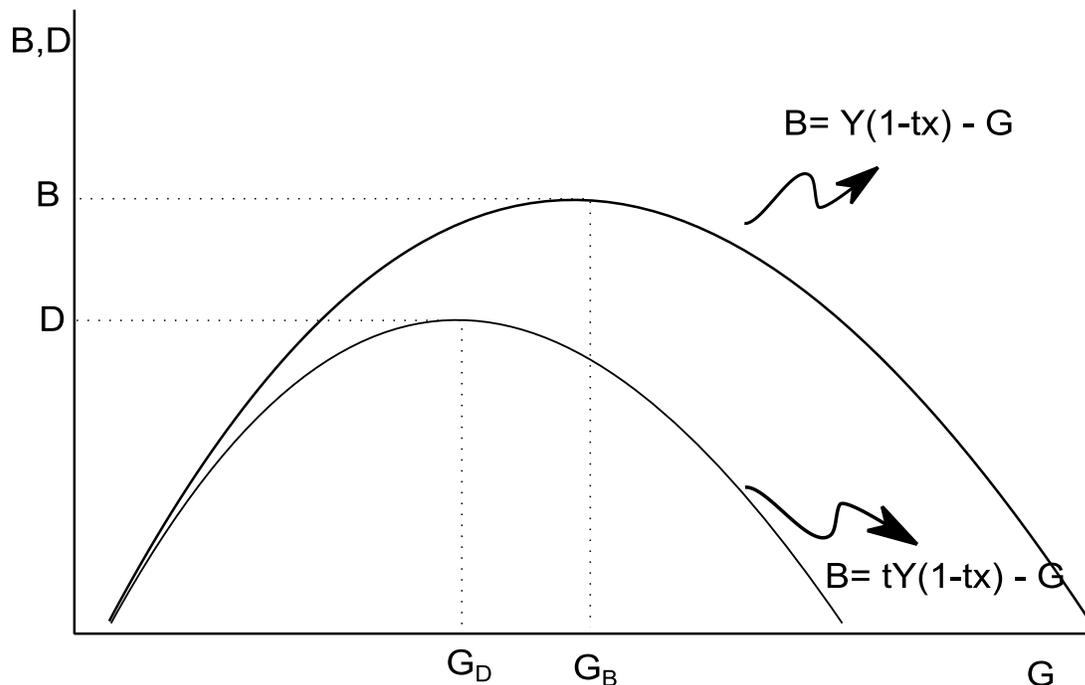
B = Y(1- ήt) – G
D = tY(1- ήt) – G

Recall that Y(G) is concave, i.e. it rises at a declining rate for G
Recall that (1- ήt) falls with t.

The dictators consumption must be funded out of tax revenue – so for any given level of tax revenue, there is less G (thus 1- ήt is lower). Also, since t is less than 1, the first term will max out sooner in D than in B, we reach our maximum sooner.

Graphically….

In the above, G is the amount of public good. The benevolent despot funds more G, which leads to higher per capita wealth of B. The dictator could also fund public goods

at this level, but if he did so, he would have no extra wealth of his own. What is the fun of that?

So instead, he taxes at a higher rate, and purchases less public good. Note, he does still purchase public goods from the tax revenue, he needs to maintain society. But every dollar he spends on roads is a dollar less for palaces……

He also taxes more, the direct benefits of higher taxes is more C, i.e. more palaces. He is again constrained, though, since the disincentive effect is still in place.

Thus…..
        At any level of G, per capita income is less under a dictatorship, as it is taxing away income to fund its own pleasure.
        The dictator will fund public goods, but less than would be optimal under a despot who was not seeking his own pleasure.

Note: the above can be complicated by the "monopolist gangster problem"