A Model of Ethnic Politics

In this document, I develop a simple political accountability model, and use it to demonstrate how ethnic homogenization could influence the provision of different types of public goods.[1]

1. Environment

Consider an environment in which incumbent politicians are incentivized by reelection to provide different types of public goods, given the ethnic composition of the political jurisdiction. Consider a two-period model in which an incumbent is already in office at the start of period 1. Incumbents are bestowed with a municipal budget B which can be spent on two types of public goods – universal p or ethnically oriented q – such that $p + q \leq B$. Ethnically oriented public goods can only be provided for the ethnic group to which the incumbent belongs.[2] For example, ethnocentric schools can be thought of as (excludable) ethnically oriented public goods, while healthcare is considered as a (non-excludable) universal public good. Incumbents derive exogenous rents $R > 0$ from office. An election is held at the start of period 2 where voters can potentially reward the incumbent – through reelection – for *good* performance, or elect a challenger.

Let k denote the fraction of partisan voters whose voting decisions depend solely on ethnicity. Assume that k is uniformly distributed on the interval $[a, 2b - a]$, where b measures the expected fraction of partisan voters and a denotes the noise in partisanship.[3] The uncertainty in k allows for unexpected variation in the socio-political climate, which may affect the level of partisan support for the incumbent. The remaining non-partisan voters support the incumbent with probability $v(p, q)$ if they share the same ethnicity with the incumbent, and $v'(p, q)$ if they do not.[4] I impose the following conditions: $v_p(p, q) \geq 0$, $v_q(p, q) \geq 0$, $v_{pp}(p, q) < 0$, $v_{qq}(p, q) < 0$, and $v_{pq}(p, q) = 0$; support for the incumbent is thus increasing and concave in either type of public goods, and public goods are non-substitutable across type. In addition, I assume that the marginal support

[1] The model motivates the empirical analyses carried out in Swee (2015): "Together or Separate? Post-Conflict Partition, Ethnic Homogenization, and the Provision of Public Schooling", *Journal of Public Economics*, 128, 1-15; it accompanied the paper in its early stages. While written specifically for the Bosnian partition, the model can also be generalized to settings in which ethnic homogenization has occurred, and in which politics play an important role in the provision of excludable and non-excludable public goods.

[2] As ethnically oriented public goods can also be thought of as patronage or club goods that are exclusive to a particular ethnic group, it is reasonable to assume that incumbents can only credibly offer such goods to their own group. Like citizen-candidates (in models of political competition) whose credible policies are constrained by innate preferences , the policy choice set of incumbents in my model is limited by ethnicity.

[3] This setup also assumes that $1 > b > a \geq 2b - 1$, and is equivalent to $k = b + \varepsilon$, where ε is uniformly distributed on $[-b + a, b - a]$ with a zero mean.

[4] Without loss of generality, I also make the implicit assumptions that $v(p, q), v'(p, q) \in [0, 1]\ \forall\ p + q \leq B$.

with respect to the universal public good are equal across ethnic groups i.e. $v_p(p,q) = v'_p(p,q)$, while the marginal support with respect to the ethnically oriented public good is zero when a voter does not belong to the same ethnicity as the incumbent i.e. $v'_q(p,q) = 0$.

Let m denote the ethnic majority share, where $\frac{1}{2} < m \leq 1$. Suppose that there are no challenger of the same ethnicity, and that the incumbent belongs to the ethnic majority, then he is reelected if:

$$km + (1-k)\left[mv(p,q) + (1-m)v'(p,q)\right] \equiv km + (1-k)x(m,p,q) \geq \frac{1}{2}$$

Notice that the incumbent's reelection likelihood consists of two parts: a partisanship component derived solely from the size of his ethnic group, and a performance-driven component that depends on how he allocates his budget to different types of public goods. This setup captures the feature of partisanship, while ensuring that political accountability exists even when ethnic composition is heavily skewed i.e. when $m \to 1$.[5]

2. Equilibrium

Let the incumbent's reelection probability be π. By exploiting the distributional properties of k, this probability can be expressed as $\pi = 1 - \frac{1}{2(b-a)}\left[\frac{1/2 - x(m,p,q)}{m - x(m,p,q)} - a\right]$. Opportunistic incumbents then maximize πR subject to the budget constraint, and the first order conditions reduce to:

$$v_p(p^*,q^*) = mv_q(p^*,q^*)$$

The equilibrium result above suggests that the marginal support with respect to universal public goods is proportional to the marginal support with respect to ethnically oriented public goods, by a factor that is equal to the share of the ethnic majority. In other words, optimality requires the equalization of the incumbent's marginal support, given the ethnic composition of the electorate. The result also implies that public goods provision $\{p^*, q^*\}$ depends only on budget size and the ethnic majority share.

Notice that we cannot compare p^* with q^* without specifying the functional form of $v(p,q)$, as the relationship depends crucially on their relative marginal support. For instance, it may well be the case that $q^* > p^*$ if providing ethnically oriented public goods delivers significantly more votes than an equivalent provision of universal public goods i.e. $v_q(p,q) \gg v_p(p,q)$.

[5] Insofar as k is not too large (small), the incumbent will not win (lose) for sure. The exact conditions that are required for an interior solution are $a \ngtr \frac{1/2 - x(m,p,q)}{m - x(m,p,q)} \ngtr (2b - a)$.

3. Homogenization

Now suppose that ethnic homogenization has occurred, and so m has increased. Through implicit differentiation, I obtain the following:

$$\frac{\partial q^*}{\partial m} = \frac{v_q(p^*, q^*)}{v_{pq}(p^*, q^*) - m v_{qq}(p^*, q^*)} > 0$$

The result above says that the provision of ethnically oriented public goods increases as a result of ethnic homogenization. This is fairly intuitive since the majority incumbent has strong incentives to divert resources towards ethnically oriented public goods which increases political support. The corollary – the provision of universal public goods decreases as a result of ethnic homogenization – is also true by similar logic, and can be easily shown.

The model also delivers distributional implications, that is, in terms of how the provision of public goods affect both the ethnic majority and minority. In particular, one can use support – $v(p, q)$ for the ethnic majority, and $v'(p, q)$ for the ethnic minority – as proxies for their welfare.[6] It is then straightforward to deduce that any non-zero provision of ethnically oriented public goods for the ethnic majority is equivalent to a diversion of resources that create a disparity in welfare between the ethnic majority and minority. Moreover, the resulting inequality worsens with respect to ethnic homogenization (since the provision of the ethnically oriented public good increases in response).

Finally, the model also informs us about the effect of ethnic homogenization on the incumbent's re-election probability:

$$\frac{\partial \pi^*}{\partial m} = \frac{(m - \frac{1}{2}) x(m, p^*, q^*)}{2(b-a)\left[m - x(m, p^*, q^*)\right]^2} \geq 0$$

Here, the incumbent is more likely to be reelected because (i) partisan support increases thanks to the numerical advantage, and (ii) non-partisan support increases as the incumbent diverts resources towards the ethnically oriented public good.

[6] From this perspective, the equilibrium allocation of resources is necessarily inefficient since a utilitarian social planner would always provide some non-zero amount of every type of public good (including the ethnically oriented one for the minority). Here, by design, only the ethnic majority receives the ethnically oriented public good.