Yun-Chien Chang, ed.,Empirical Legal Analysis: Assessing the Importance of Legal Institutions, 2014. Routledge, New York.

1 Why was the democratic transition in South Africa viable?

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Introduction

On October 11, 1996, the National Parliament of the new Republic of South Africa unanimously approved a new democratic constitution. The constitution emerged from over six years of negotiations between South Africa's once ruling white elite represented by the National Party (NP) led by F. W. de Klerk and the long oppressed Black and Asian majorities represented by the African National Congress (ANC) led by Nelson Mandela.

In prior work we explained how the South African Constitution and the institutions of federalism (through the creation of nine provinces with allocative powers) provided self-enforcing protections for the economic interests of the white elite that had ruled during the apartheid era.[1] In South Africa, redistributive taxation is decided by the majority-controlled central government, but provinces, including the elite-run Western Cape, are assigned fiscal responsibility for the provision of at least some redistributive services–K-12 education, basic healthcare, and welfare transfers. Federal governance then creates a "hostage" game between a majority-controlled central government and the elite-run Western Cape that provides important redistributive services to majority residents. (As we will explain in detail, the Western Cape is able to ensure that it receives suitable allocations from the center because it has the implicit threat to distribute funds away from its majority residents—the "hostages.") We observed that the fiscal allocations from 1996 to the beginning of the current regime of Jacob Zuma were sustainable as a long-run policy equilibrium.

In this chapter we turn back history and ask a more basic question. Was the deal between de Klerk and Mandela in the long-term joint interests of the white minority as well as the non-white majority and, if so, why? To answer these questions, we evaluate the long-run economic performance of South Africa's federal democracy. We show that compared to the alternative of remaining in apartheid, the lifetime economic gains have been sizeable for all South Africans. We then compare the federal outcomes to what might occur were the federal equilibrium to collapse and South Africa to become a de facto unitary democracy (a serious possibility in the era of post-Mandela politics). Even in this case, unitary governance strongly dominates apartheid for both the majority and minority residents. The long-run economic performance of federal governance is modestly better than its unitary alternative, but either form of democracy appears sufficient, ex post, to economically justify leaving apartheid for whites as well as non-whites.

Federalism and the democratic transition: an overview

When South Africa undertook its transition to democracy, it required a constitution that was approved by both the elite white minority and the poor non-white majority. The constitution could have been either a *unitary* centralized democracy with a single, majority-elected central government setting all policies, denoted as **U**, or a *federal* decentralized democracy where policy responsibilities were shared between the national government and constitutionally created provinces, denoted as **F**. In the case of a federal democracy, the constitution would specify provincial boundaries and assign policy responsibilities between central and provincial governments. If minimal taxing powers were given to the provinces, then the constitution would also specify intergovernmental transfers from the central government to the provinces. South Africa opted for a federal system, with constitutionally specified *provincial boundaries* described by the share μ of majority residents originally living within the elite-controlled Western Cape. We view the case where $\mu = 0$ as equivalent to unitary governance, where a majority-run government taxes a fully separated elite to provide redistributive services and transfers to the majority.[2]

In our model, there is an initial constitutional state in which the form of government is chosen and an annual policy stage in which specific allocative decisions are made. In the policy stage, provincial *service assignments* are specified by $\lambda > 0$, reflecting the relative value or utility that a typical majority resident places on the redistributive services q assigned by the constitution to be provided by the provinces. In the case of unitary governance, all redistributive services are provided by the central government using elite tax revenues. We assume that the center is able to monitor the provision of redistributive services when it is in their interest to do so.

The value of any particular constitution will be the discounted present value of all future utilities that follow from the choice of the parameters μ and λ, and the constitutional form, denoted as κ. For majority (non-white) residents:

$$V_M(\mu, \lambda) = \Sigma\delta^t \times \omega_t(\mu, \lambda),$$

while for elite residents:

$$V_E(\mu, \lambda) = \Sigma\delta^t \times y_t(\mu, \lambda),$$

where ω is the utility of the majority worker, y is the utility of the typical member of the white elite, δ is the discount factor bounded as $0 < \delta \leq 1$ specified as $\delta = 1/(1 + r)$, where r equals the majority's and elite's rate of time preference (which may be different). For negotiations at the constitutional stage, the set of feasible democratic constitutions will be those for which both $V_M(\mu, \lambda)$ and $V_E(\mu, \lambda)$ are greater than or equal to the autocratic alternative in which the apartheid system is maintained (designated as A). Formally,

$$V_M(F) = V_M(\mu > 0, \lambda > 0) \geq V_M(A)$$

and

$$V_E(F) = V_E(\mu > 0, \lambda > 0) \geq V_E(A),$$

under federalism ($\mu > 0$) and:

$$V_M(U) = V_M(\mu = 0, \lambda > 0) \geq V_M(A)$$

and

$$V_E(U) = V_E(\mu = 0, \lambda > 0) \geq V_E(A),$$

under unitary governance ($\mu = 0$). Majority and elite welfares under autocracy (A) are exogenous.

A federal constitution specifying provincial borders ($\mu > 0$) and assignment ($\lambda > 0$) constraints will be *sufficient* for the peaceful transition to democracy if both the majority and the elite prefer either federal or unitary democracies to autocracy, but between the democratic constitutions federalism is mutually preferred to unitary governance: $V_M(F) > V_M(U) > V_M(A)$ *and* $V_E(F) > V_E(U) > V_E(A)$. The federal constitution becomes *necessary and sufficient* for the transition when both parties prefer a federal democracy, but the elite prefers autocracy to a unitary democracy: $V_M(F) > V_M(U) > V_M(A)$ *and* $V_E(F) > V_E(A) > V_E(U)$. Other rank-ordering of federal, unitary, and autocratic constitutions are possible, but it will be these rankings where federalism facilitates the transition to democracy.[3]

Whether a peaceful democratic transition occurs depends crucially on exactly how constitutional rules determine annual policy outcomes. In our previous work, we evaluated these policy outcomes. In this chapter, we estimate $V_M(\bullet)$ and $V_E(\bullet)$ and evaluate the constitution's ability to facilitate the democratic transition.

South Africa's economy—from transition to the present

We begin this section by describing the annual policy game played by the elite minority and the poor majority—a non-cooperative game in which the majority chooses between a unitary or federal system and the elite minority chooses whether or not to capture substantial revenues in the Western Cape. This allows us to specify the social welfare-maximizing outcome—a federal system with minimal shirking by the elite. We first describe the budgetary constraints and cost considerations that limit the available alternatives. This allows us to determine the annual utility that each group will achieve in pursuing each of its strategic alternatives.

Budget choices: The majority-controlled central government chooses an aggregate redistributive tax per elite resident (τ) whose proceeds are allocated to the provincial governments as a redistributive grant (g) to provide services for majority residents. The central government also sets national standards for the constitutionally assigned, provincially provided redistributive service inputs (q), which are provided at a cost $s(q)$.

The requirements for service inputs can be determined either by a constitutional requirement to provide a "fair" or "adequate" service level to all citizens, by presidential preferences, or by majority citizen preferences. Standards for the provincially assigned redistributive services that come from a constitutional court or an agenda-setting president, we call the *exogenous* q-regime. Standards set by majority rule politics, we call the *endogenous* q^*-regime; in this case q^* is set by the central government so as to maximize the welfare of the median majority resident. Our analysis will specify the feasibility and sustainability of democratic federalism under both the exogenous non-majoritarian q-regime and the endogenous majoritarian q^*-regime.

After satisfying the required service standard, provinces are free to allocate the remainder of their redistributive grant to services of their own choosing. All fiscal policies are decided subject to an aggregate redistributive budget constraint that requires that spending on redistributive services and transfers be financed by centrally raised and administered redistributive taxation.

The taxpaying elite is free to leave the country or to adopt tax avoidance strategies as the redistributive tax rate increases. Tax avoidance is the primary means by which the elite reduces its tax payments. There is a revenue hill for redistributive taxation. Revenues initially increase as the tax rate per elite resident rises, reach maximum at τ_U, and then decline. Majority dominated unitary governments always select the maximum rate. Given the revenue potential of national redistributive taxation, it will be important to see if democratic federalism will support an equilibrium redistributive tax rate, denoted τ_F, that is less than τ_U.

Provision of redistributive services: The primary inputs in the provision of redistributive services are public employees: teachers, doctors, nurses, social workers, and public administrators. Because all public employees are paid a common civil service wage, more productive public employees will be less expensive when providing any required service input bundle. We assume that elite public employees are well trained and therefore have cost advantage over majority, less well-trained public employees. It is this "inherited" productive advantage of elite public employees working in the Western Cape that will prove crucial to the elite's ability to check redistributive taxation. The majority needs the elite and therefore has an incentive to retain the elite's participation in the provision of redistributive public services.

If the unitary regime is chosen, the well-trained elite teachers, nurses, doctors, and civil servants are expected to reduce their effort or exit the public sector for comparable employment in the private economy. This assumption is important. It is the elite's cost advantage that protects the attractiveness to the majority of the federal form of governance, and it is only within federal governance that the elite has any ability to hurt the majority if they adopt too high a redistributive tax rate.

Fiscal effort: While the central government can monitor the inputs allocated by the provinces to redistributive services, it cannot monitor the level of redistributive transfers meant for the poor. These extra or "free" redistributive revenues (r) can be "captured" by the elite in the Western Cape for services consumed by the elite residents. The share that is captured ($0 \leq \varphi \leq 1$) measures a lack of redistributive effort by the province. The majority-run central government and the majority provinces would like minimal provincial shirking with $\varphi = 0$. We assume that majority-run provinces allocate all free redistributive revenues to their poor constituents. However, in elite-controlled provinces there is shirking.

We assume there is lower value of fiscal effort φ_L, perhaps very small, that the Western Cape can always allocate to elite residents, but there is an upper limit φ_H as well. The upper limit is set by the fact that majority residents in the Western Cape can leave the province. Given the cost of exit, the upper limit is set to equalize the welfare of a typical poor resident in the Western Cape with shirking and a majority-run province without shirking. If the majority does leave, the Western Cape will receive no redistributive transfers from the central government, have no redistributive responsibilities, and have no ability to affect the national redistributive tax rate.

Choosing a level of capture above the lower bound is not costless. When services to lower-income residents are noticeably reduced, poor residents within the Western Cape impose a "protest" penalty (ρ) on each elite resident. These costs come as the consequence of spontaneous marches or riots or from formally organized strikes. The costs of such protests may discourage redistributive shirking via high capture.

Economic welfare: Economic welfare of elite residents will equal their pre-tax income, Y, minus redistributive tax payments (τ) plus any resources "captured back" through reduced fiscal effort ($\varphi \bullet r$) in the Western Cape:

$$y(\tau, \varphi_L) = Y - \tau + \varphi_L \bullet r_e(\tau; q),$$

under federalism with low capture;

$$y(\tau, \varphi_H) = Y - \tau + \varphi_H \bullet r_e(\tau; q) - \rho,$$

under federalism with high capture, less a protest penalty; and:

$$y(U) = Y - \tau_U,$$

under unitary governance. All elite residents are assumed to live in the Western Cape. The elite leadership wishes to maximize $y(\bullet)$.

The economic welfare of a typical majority resident will be the sum of private-sector income, W, the utility value of redistributive services, denoted $v(q)$, and any "free" redistributive revenues not captured by the provincial government, $(1-\varphi) \bullet r$. For a majority resident living in the Western Cape with capture φ ($= \varphi_L$ or φ_H):

$$\omega_e(\tau, \varphi) = W + v(q) + (1-\varphi) \bullet r_e(\tau; q),$$

while for the majority resident living in a majority province:

$$\omega_m(\tau, \varphi) = W + v(q) + r_m(\tau; q).$$

Because the provision of public services in the Western Cape is more efficient, $r_e(\tau; q) > r_m(\tau; q)$. In equilibrium this advantage must be sufficient to just compensate poor residents of the Western Cape for elite capture. In a federal equilibrium, a fraction (μ) of the majority residents will live in the Western Cape and $(1-\mu)$ of the residents will live in majority-run provinces. We assume the majority leadership wishes to maximize the welfare of the average majority resident defined as:

$$\omega(\tau, \varphi) = \mu \bullet \omega_e(\tau, \varphi) + (1-\mu) \bullet \omega_m(\tau, \varphi),$$

under federalism, and:

$$\omega(\mathrm{U}) = W + v(q) + r(\tau_U; q)$$

under unitary governance.

Our goal is to find a sustainable constitution that implements *democratic federalism*. A federal constitution with elite-run provinces is not by itself sufficient to ensure that provinces have influence. The majority-run central government can always set a maximal redistributive tax rate, τ_U, while still using provinces to provide redistributive services. Or, stronger still, the central government can choose maximal redistribution and use a central bureaucracy to provide redistributive services. Here, provinces are irrelevant to the policy outcomes, in effect de facto *unitary democracy*. Only under *democratic federalism* are elite policy preferences respected.

Credible elite punishments: Two conditions, which we define more precisely in the next section, must hold for high capture to be a credible elite punishment in those instances when the majority leadership selects maximal redistributive taxation, τ_U. The first condition is the *assignment constraint*. It requires that constitutionally assigned redistributive public services be attractive enough that the majority-controlled central government still prefers to use a provincial system, even if the elite adopts high capture in the Western Cape. If the assignment constraint did not hold, then when the Western Cape adopted high capture, the majority-controlled central government could simply move to de facto unitary governance, supply redistributive services centrally, and deny the elite any access to high capture of free redistributive transfers. The annual level of redistribution services required by the central government will be decided by either the exogenous non-majoritarian (q-regime) or the endogenous majoritarian (q^*-regime) politics.

The second condition is the *border constraint*. This constraint sets a lower and upper bound on the number of majority residents who live in the Western Cape. If too few majority residents are in the Western Cape, then the elite's threat to adopt high capture is ineffective. But if there are too many majority residents in the Western Cape, high capture ceases to be a credible elite punishment.

When the assignment and border constraints are met, high capture becomes a credible elite punishment. The federal Constitution specifies these constraints. If they are met, then the resulting fiscal policy game becomes a "hostage" game.[4] The majority controls the central government's tax rate and thus holds the elite's income "hostage." Through the assignment and border constraints, the elite controls redistributive services to a significant share of the majority population and thus holds the welfare of the average majority resident "hostage." In our earlier paper (Inman and Rubinfeld 2012), we have shown the conditions under which this hostage game results in a less than fully redistributive fiscal equilibrium. But, was the move to this equilibrium in the economic interest of the white elite? We pursue that question in the next section.

Will South Africa's new federal democracy continue to be sustainable?

There is little doubt that South Africa's transition from autocracy to democracy would not have occurred had the majority ANC and the two major minority parties, the elite NP and the tribally based Zulu Inkatha Freedom Party (IFP), not been willing to accept a federal fiscal constitution with at least one politically protected province for each minority party, and with each province promised significant, but not fully autonomous, fiscal powers.[5] It was only after this agreement was reached in mid-April of 1994 (the Interim Constitution), could democratic elections could go forward. By all measures, the elections were a success. Ninety percent of the population voted in a peaceful and honest election, with Nelson Mandela elected president. The NP emerged as the leading opposition party with 21 percent of the national vote. Finally, as expected, the NP and IFP each won political control over their own province, Western Cape and KwaZulu-Natal respectively.

While the Interim Constitution created independent provinces and the ground rules for presidential and parliamentary elections, it left the fiscal details of the new federal system largely unspecified. The Final Constitution, approved in 1996, filled the gap by specifying the assignment responsibilities of the central and provincial governments, the allowable provincial taxes, and the role for intergovernmental transfers.

The status of democratic federalism in South Africa

Three facts have been evident in South Africa since the time of transition:

1 provincial governments have been given a significant role in the provision of redistributive services, funded entirely by grants from the central government;
2 the elite Western Cape receives approximately 20 percent less in redistributive services grants; and
3 basic service grants available for capture by the elite are significant.

The question now arises: Is the structure of redistributive public finance consistent with sustainable federal governance? For democratic federalism to be a viable long-run constitution it must first satisfy the border and assignment constraints specified for the q-regime, or, for the later budgets after financial year (FY) 2006/07, the q^*-regime. Will this regime continue to be sustainable in the future? In the remainder of this section we offer a brief version of our perspective.[6]

Crucial to the successful transition was that at least one important province—the Western Cape—be politically controlled by the elite. The borders of the Western Cape were explicitly drawn to ensure elite political control over provincial politics and a sufficiently large share of majority residents as "hostages" so that elite high capture would be a credible punishment if the poor majority chose maximal taxation at the national level. We estimated the resulting share of the majority voting-age population residing in the Western Cape to be $\mu = 0.184$. For our specification of the South African political economy, this value of μ satisfies the required border constraints for both the exogenous q- and endogenous q^*-regimes; the two alternative views can be seen in Figures 1.1 and 1.2.[7]

The Mandela presidency was arguably an exogenous q-regime. During Mandela's tenure, the level of redistributive services was approved by the ANC-controlled legislature. To fund the recommended level of redistributive services required substantial redistributive grants. These requirements are very close to actual redistributive funding for the budget years of the Mandela presidency (FY 1995/96 to FY 2000/01). Given $\mu = 0.184$, the exogenous q- of 0.53 falls within the set of feasible assignments for a q-regime as shown in the shaded area ABC in Figure 1.1. The Mandela presidency could sustain democratic federalism.

Matters became less certain under the leadership of Mandela's successor, Thabo Mbeki. The Mbeki budgets' levels of redistributive services were very near the Mandela/Financial and Fiscal Commission (FFC) recommendations until FY 2005/06, at which time redistributive spending began a strong upward trend toward today's values of $q = 0.85$. This break in required redistributive services suggests a possible break in underlying political regimes as well, away from a strong president setting required redistributive services exogenously and toward a president increasingly responsive to the preferences of the majority-controlled ANC. Concurrent political events culminating in the ouster of President Mbeki in favor of the populist candidate Jacob Zuma, first as head of the ANC (December

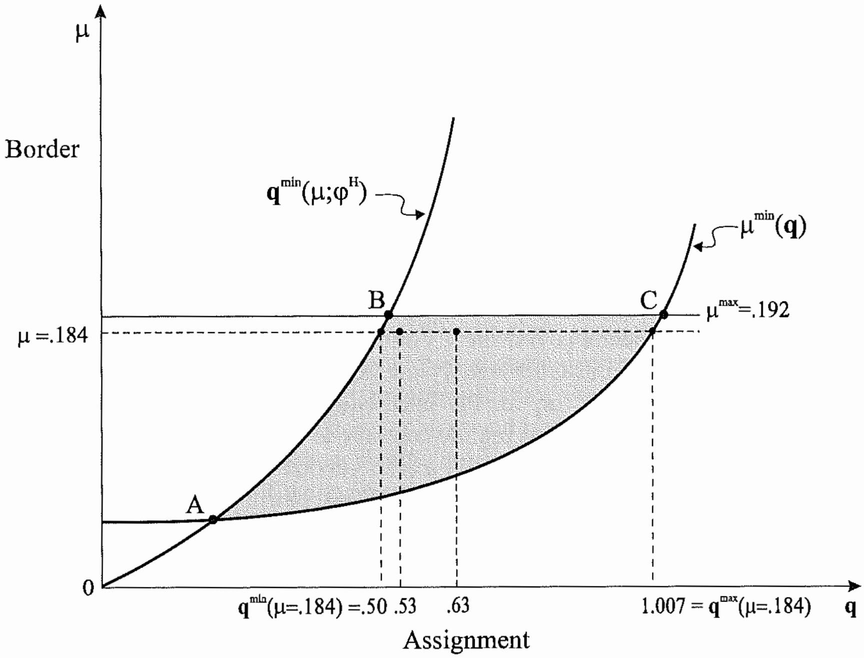

Figure 1.1 Feasible federalism for the q-regime

Notes:

Mandela Assignment $q = .53$
Mbeki Assignment (FY 05/06) $q = .63$

Coordinates for points:

A: $\mu = .050$; $q = .20$
B: $\mu = .192$; $q = .51$
C: $\mu = .192$; $q = 1.02$

2007) and then as President (September 2008), strongly suggest such a regime change. If so, South Africa's federal policies must meet the requirements for a q^*-regime. Our analysis for the Mbeki budget in FY 2008/09 is consistent with a democratic federalism equilibrium. We estimate that for this budget $q^*_{\mathrm{H}} = 0.88$. For this budget, democratic federalism remains feasible.

The last budget that we were able to analyze is FY 2009/10, the first official budget from the new presidency of Jacob Zuma. The FY 2009/10 budget implies $q^*_{\mathrm{H}} = 0.95$, just within the upper bound for redistributive services to support an equilibrium within the federal system. This is an 8 percent increase over the last Mbeki budget and a nearly 35 percent increase over what might reasonably be seen as the last presidentially decided budget of FY 2005/06. A slight increase in the majority's demands for redistributive services will push $q^*_{\mathrm{H}} > 0.98$. This level of demand for redistributive services moves equilibrium fiscal policies outside the feasible set for democratic federalism in Figure 1.2 (area $A^*B^*C^*$), undermines the ability of the elite to impose a credible high capture penalty, and leaves the door open to maximum redistribution. In this case, democratic federalism is no longer a feasible check on redistributive taxation.

The sustainability of South Africa's federal contract

Even if democratic federalism is *feasible*, it might not be *sustainable*. For sustainability, the parties to the constitution must be sufficiently farsighted that they check their short-term inclinations to exploit the other party. Farsighted players will have values of their discount factor (δ) near 1; shortsighted players nearer 0. The true values of the discount factors for majority and elite residents are not known. The real current rate of interest for South African treasury bonds is about 7 percent; assuming the elite chooses to save at that rate, then $\delta_e = 0.93$. For those discount factors, democratic federalism can be sustainable for both the exogenous q- and endogenous q^*-regimes.

The question now remains: Anticipating that the Mandela budgets would be short-lived and the federal fiscal contract may be pushed to its redistributive maximum,

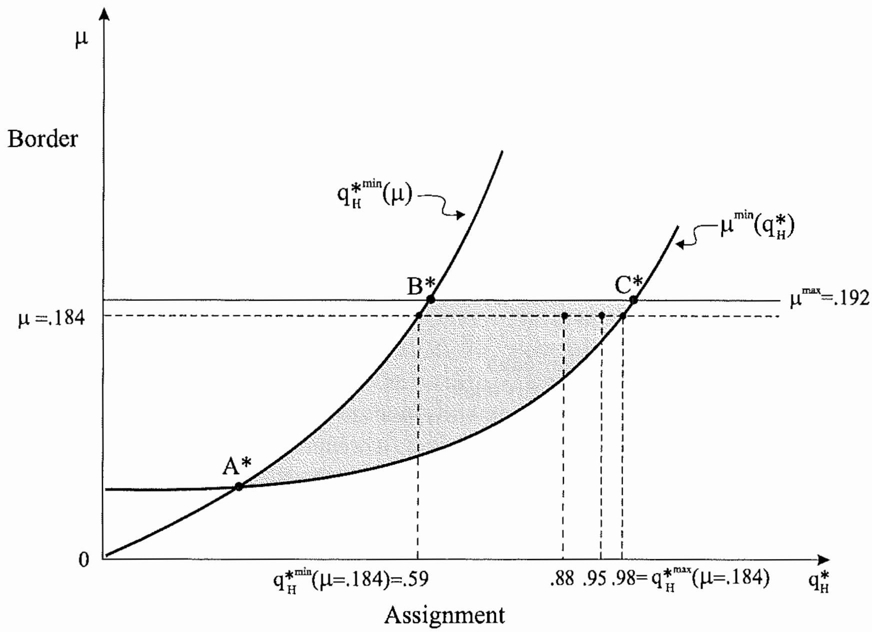

Figure 1.2 Feasible federalism for the q^*-regime

Notes:

Mbeki Assignment (FY 08/09) $q_H^* = .88$
Zuma Assignment (FY 09/10) $q_H^* = .95$

Coordinates for points:

A^*: $\mu = .055$; $q_H^* = .25$
B^*: $\mu = .192$; $q_H^* = .61$
C^*: $\mu = .192$; $q_H^* = .99$

did the elite make the right decision in agreeing to a peaceful democratic transition? The next section explains that they did.

The economic value of the democratic transition

The value of the democratic transition for South Africa's majority and elite residents equals the difference between the present value of economic welfare under democracy and that under apartheid. Under unitary governance this equals $\Delta V_M(U) = V_M(U) - V_M(A)$ for majority residents and $\Delta V_E(U) = V_E(U) - V_E(A)$ for elite residents. Under federal governance, $\Delta V_M(F) = V_M(F) - V_M(A)$ and $\Delta V_E(F) = V_E(F) - V_E(A)$ apply. A peaceful transition occurs when $\Delta V_M(U) > 0$ and $\Delta V_E(U) > 0$ or $\Delta V_M(F) > 0$ and $\Delta V_E(F) > 0$ hold. Using the results of the policy game to estimate annual utilities, we compute the ΔV's for the constitution game and evaluate the transition choice. The underlying data that were used to specify the parameters of the model are given in Table 1.1. With the continuation of apartheid, the typical majority resident is assumed to receive their market wage W = 9,700R per year. These wages were adjusted each year by our estimates, given in Table 1.2, for South Africa's rate of growth of income under the apartheid regime. Also under apartheid, the average majority resident is assumed to receive redistributive services through homeland governments of $q = 0.16$.[8] The elite resident under apartheid is assumed to receive their market wage of Y = 86,000R per year, also adjusted each year by the apartheid regime's rate of growth. Netted from elite incomes are

Table 1.1 Political economy of South Africa

Demographics and incomes
N_0 = 9.6 million elite M = 25 million majority Y = 86,000 (Real 2000) Rand/elite adult W = 9,700 (Real 2000) Rand/majority adult
Redistributive service costs
S = 80,000 (Real 2000) Rand/public employee (average uniform salary) $s_e(q) = (S/a_e) \cdot q = (80{,}000/17) \cdot q = 4{,}706 \cdot q$ (Real 2000) Rand/majority adult $s_m(q) = (S/a_m) \cdot q = (80{,}000/14) \cdot q = 5{,}714 \cdot q$ (Real 2000) Rand/majority adult $s_u(q) = (S/a_u) \cdot q = (80{,}000/7) \cdot q = 11{,}428 \cdot q$ (Real 2000) Rand/majority adult $s_U(q) = m \cdot s_m(q) + (1 - m) \cdot su(q) = 6{,}714 \cdot q$ (Real 2000) Rand/majority adult
Discount factor and redistributive preferences
$\delta = 0.97$ $\lambda \cdot v(q) = \lambda \cdot \ln(q)$, where $\lambda \geq 4123$
Special interest payments
Z = 600 Million (Real 2000) Rand

the annual real costs of homeland payments for local redistributional services plus expenditures for military, police, and prisons. Together, we estimate these annual tax costs of apartheid as 6,250R per elite adult resident.[9] Under democracy, the typical majority resident receives their initial market wage of 9,700R per year now adjusted by our estimates of income growth under democracy. Under democracy, the majority resident receives a significant increase in redistributive services, initially to $q = 0.53$ under Mandela and then to $q = 0.77$ in the last year of the Mbeki presidency. If South Africa remains a federal government, then we hold $q = 0.77$ as the limit of redistributive services consistent with democratic federalism. If, however, the federal contract collapses and South Africa becomes a de facto unitary democracy, then we set $q = q^*_U(\lambda = 4123) = 0.61$ as required for the majority choice of redistributive services.

The elite resident under democracy receives their initial wage of 86,000R per year, again adjusted annually by income growth under democracy. Expenditures for military, police, and prisons are still required under democracy. We estimate the annual tax costs per elite resident of these services at 8,145R.[10] Democracy's most significant fiscal consequence for elite welfare, however, is the large increase in redistributive taxation. If South Africa remains a federal government, the elite's annual tax costs for redistribution, net of any savings from provincial capture, are estimated as 29,242R per elite resident.[11] Under unitary democracy, the elite's annual tax costs for redistribution will be 32,000R per elite resident; there is no capture. Total annual tax burdens per elite resident will be 37,387R under a federal democracy and 40,145R under unitary democracy. Democracy will need to provide a significant growth dividend above apartheid for the elite to favor a transition to democracy.

Table 1.2 estimates this growth dividend by comparing the rates of growth of income in South Africa under apartheid (1950–93) to growth during the first fourteen years (1994–2007) of the new democracy. The apartheid years can be divided into three regimes. The early years, 1950–75, were largely peaceful and allowed South Africa's full participation in the world economy. That changed in 1976 with the Soweto massacre of innocent school children protesting the requirement they be taught in Afrikaans. The international community responded with a series of increasingly constraining trade sanctions lasting until 1993. We represent this regime by the indicator variable SANC = 1 for 1976–93 (0 otherwise). The third regime began in 1985 with the formation of the activist union federation known as The Congress of South African Trade Unions or COSATU. We represent this regime by the indicator variable COSATU = 1 for 1985–97 (0 otherwise). The post-apartheid years are represented by the indicator variable DEM = 1 for 1994–2007 (0 otherwise).

Table 1.2, column 1, provides estimates of the effects of each regime on South Africa's real rate of growth. Our estimates, based on data running through 2007, show an average rate of growth for the 25 peaceful years of apartheid of just over 2 percent per annum (SANC = COSATU = DEM = 0). For the nine years of sanctions only, the growth rate fell substantially; we estimate it to be just over 1 percent per annum. Importantly, from 1985 to 1993, when both sanctions and strong unions

Table 1.2 Economic growth under apartheid: 1950–2007

Independent variables	*GROWTH RATE* (1)	*GROWTH RATE* (2)	*OPEN* (3)	*INV* (4)
Constant	2.09 (0.36)*	–3.37 (1.74)*	60.14 (0.67)*	12.49 (0.37)*
OPEN	—	0.11 (0.03)*	—	—
INV	—	–0.099 (0.11)	—	—
SANC	–1.03 (0.65)	—	–14.16 (1.22)*	0.81 (0.68)
COSATU	–1.76 (0.74)*	—	–7.41 (1.39)*	–4.21 (0.78)*
DEM	2.33* (0.95)	—	1.81 (1.77)	2.19 (0.99)*
R^2(Adj)	0.24	0.16	0.84	0.37

Source: GROWTH RATE, OPEN, and INV are from the Penn World Tables, 6.3 and correspond to the PWT variables GRGDPCH, OPENK, and KI, respectively. OPEN is the ratio of (Exports + Imports)/GDP measured in percent and INV is ratio Gross Investment/GDP also measured as a percent.

Notes:

1 Dependent variable: annual real rate of growth of GDP per capita. Independent variables: OPEN (exports plus imports as a percentage of GDP), INV (gross investment as a share of GDP), DEM (1 for the years 1994–2007; 0 otherwise), SANC (1 for the years 1976–1993; 0 otherwise), and COSATU (1 for the years 1985–1993; 0 otherwise).

* Significant at the 5 percent level; standard errors within parentheses.

were in force, the annual growth of the apartheid economy became negative. Democracy restored a large positive rate of growth as trade sanctions were lifted (SANC = 0) and COSATU adhered to ANC economic policies (COSATU = 0).

Table 1.2, columns 2 and 3, illustrate the paths through which each regime impacted growth. Country growth depends fundamentally upon trade openness (OPEN = (Exports + Imports)/GDP)).[12] Sanctions and strong unions had their primary effect through restricted trade (column 3) during apartheid. Democracy's positive impact on growth has been through improved trade openness (column 3); at least as of 2000, there was no significant improvement in the rate of domestic investment under democracy (column 4).[13] In confirming the success of the transition to democracy, we have conservatively estimated the economy to be growing at an average annual (nominal) rate of 2.5 percent.[14]

We have used the data in Table 1.2 to compute the long-run economic benefits for majority and elite residents from the transition from apartheid to either a federal or unitary democracy. Annual utility for majority residents under apartheid equals $\omega_t(\mathrm{A}) = W_t + \lambda \times \upsilon(q_t = 0.16)$, $\omega_t(\mathrm{F}; \varphi^{\mathrm{L}})$ under democratic federalism, and $\omega_t(\mathrm{U})$ under unitary democracy. In each case we specify $\lambda \times \upsilon(q_t) = 4123 \times \ln(q_t)$ as the utility value of redistributive services to majority residents. Annual utility for elite residents equals $y_t(\mathrm{A}) = Y_t - 6{,}250$ under apartheid, $y_t(\mathrm{F}; \varphi^{\mathrm{L}})$ under democratic federalism, and $y_t(\mathrm{U})$ under unitary democracy. Utilities are discounted at a real rate of interest of 0.03 ($\delta = 0.97$) over a horizon of 70 years, beginning from 1994, the date of the transition decision.

For majority residents, both federal and unitary democracies are unambiguously preferred to apartheid, even from this strictly economic perspective. Majority residents gain from improved economic growth and receive a larger redistributive transfer. Federal governance is preferred, though only slightly. The lifetime welfare gain for a young majority resident is approximately 270,000R (US$39,000) by moving to a federal democracy and 275,000R (US$40,000) by moving to a unitary democracy.

Importantly, elite residents also benefit economically from the transition to democracy. Though redistributive taxation is significantly higher under both federal and unitary democracies, the growth dividend from abandoning apartheid is more than compensating. Elite residents prefer federal democracy because it controls maximal transfers and allows capture in the Western Cape of spending not required for redistributive services. More importantly, the gain for an elite resident of moving to a federal or unitary democracy has been very substantial. Elite residents with even a very modest real rate of time preference would have preferred democracy to apartheid.

For both the majority and elite residents of South Africa, moving from apartheid to democracy made good economic sense, primarily undoing the dysfunctional private economy created by the repressive apartheid regime. Both outside sanctions and inside economic pressures from organized labor imposed large penalties on the private economy. While the institutions of democratic federalism as implemented in South Africa add to the gains of the transition, we see with 20:20 hindsight that they may not have been necessary to the original democratic agreement. (Unitary democracy appears nearly as beneficial.) Still, from our analysis in the third and fourth sections of this chapter, federalism did provide the basis for a credible promise by the majority not to fully exploit the economic wealth of the minority. It was only with this credible promise in hand that negotiations could move forward to the election of Nelson Mandela as the President of the new South Africa.

Concluding remarks

South Africa's transition from autocracy to democracy stands as one of the significant political events of the last century. The transition was peacefully negotiated, the democratic bargain is holding, and the majority and elite residents of South Africa have, on average, shared in the significant economic dividend arising from the new democracy. Our model and its application to the South African transition also suggest three general lessons for what might be required to facilitate the move from autocracy to democracy in other settings.

First, if all parties in autocracy have the ability to veto the new democratic regime, then the democratic transition must provide additional economic resources sufficient to ensure that all parties can be made better off by the transition. (In other words, the democratic transition must be Kaldor–Hicks optimal.) There must be either a "peace dividend" from reduced outlays for military or police expenditures or a "growth dividend" from improved resource allocations and higher growth. It is the growth dividend that has proven so valuable for South Africans.

Second, all parties capable of blocking the democratic agreement must share in the benefits that the agreement creates, and each party's gains must be credibly protected against subsequent exploitation by the other agreeing parties. Providing these credible protections is the responsibility for democracy's new institutions. Giving minorities control over the military is certainly one option. Alternatively, one can use democratic institutions to create "hostage" games where each party to the new constitution can use a non-exploitable asset to penalize the other parties if they deviate from the agreed to division of the democratic dividend. In South Africa, these institutions were created by the federal constitution that utilized and protected the elite's human capital advantage in providing education, healthcare, and welfare administration. The Western Cape "controls" the provision of important public services to the majority; the majority central government "controls" elite after-tax incomes.

If the democratic transition was successful in South Africa, why did it fail in neighboring Zimbabwe? While the answers are many, one important difference is that the minority Rhodesians were never more than 5 percent of the population, and they were never concentrated in any particular province.

Third, since the benefits of democracy may be delayed, some or all of the negotiating parties may need to be sufficiently patient—that is, δ must be sufficiently high—to ensure that long-run gains from the transition exceed short-run costs. Older elites, or those with plans to retire to Switzerland, may not find the gains from a peaceful transition to democracy sufficiently attractive. In such cases, armed conflict may be the only option for the oppressed majority. Fortunately, South Africa's ruling elite took the long view.

Finally, these general lessons help to place our work in the wider debate as to the relative contributions of institutions or endowments to long-run economic growth. The South Africa experience provides a clear example of where institutional design–federalism–facilitated the democratic transition and it was the democratic transition that allowed subsequent country growth. At the same time, it was the elite's substantial endowment of human capital that gave reason and content to the institutions that allowed the democratic transition. In our analysis of South Africa, both institutions and endowments matter.

Notes

1 Robert P. Inman & Daniel L. Rubinfeld, *Federal Institutions and the Democratic Transition: Learning from South Africa*, 28 J.L. Econ. & Org. 783–817 (2012).

2 Alternatively, when $\mu = 0$, the elite could be given control over redistributive taxation, in which case the constitution codifies elite secession. Early in the negotiations the NP proposed such a constitution, but it was quickly rejected by the ANC; *see* Patty Waldmeir, Anatomy of a Miracle: The End of Apartheid and the Birth of the New South Africa (1997).

3 μ and λ can assume a variety of values. *Unitary democracy* occurs in this full information environment when there is no Pareto advantage to federalism for the majority and the elite prefers at least unitary governance to autocracy: $V_M(U) > V_M(F) > V_M(A)$ and $V_E(F) > V_E(U) > V_E(A)$. Since approval by both the elite and the majority are needed for the transition to democracy, *no transition* occurs when autocracy remains the elite's preferred option: $V_E(A) > V_E(F) > V_E(U)$.

4 *See, e.g.*, Oliver Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 Am. Econ. Rev. 519 (1983).

5 Waldmeir, *supra* note 2, at ch. 13.

6 The results are described in detail in Robert P. Inman & Daniel L. Rubinfeld, *Understanding the Democratic Transition in South Africa*, 15 J.L. Econ. & Org. 1–23 (2012).

7 Figures 1.1 and 1.2 follow from our specification of the South African political economy. The upper bound on the majority that can be assigned to the Western Cape, denoted μ^{max} is $\mu^{max} = N(\tau_U)/M = 0.192$, where $N(\tau_U)$ is the maximum elite population paying taxes even when the majority chooses the full redistributive tax rate.

8 During the last years of apartheid, homeland budgets averaged about 1,052 Rand for each of the 25 million majority adult residents (Development Bank of South Africa, *Annual Reports*). We assume these services were provided by majority providers at a cost of 6,714 Rand per unit or $q = 1052R/6714R = 0.16$.

9 Average annual expenditures for military, police, and Justice Department services over the period 1977–93 totaled 33.7 billion (2000) Rand per year; South African Department of Information, Perskor, South Africa. Average annual homeland expenditures were 26.3 billion (2000) Rand per year; Development Bank of South Africa, Annual Report. Total expenditures are therefore 60 billion Rand, which when allocated over the 9.6 million elite adults, averages to 6,250 Rand per elite adult resident.

10 Total spending for military, police, and prisons has averaged 39.1 billion (2000) Rand per year since the end of apartheid. Under redistributive taxation, the elite population is estimated to be 4.8 million adults. Thus, the annual tax burden per elite resident for security spending will be 8,145 Rand (= 39,100 million Rand/4.8 million elite adults).

11 In the federal equilibrium, there will be approximately 5.1 million adult elite residents and 25 million adult majority residents. Taxes paid to the central government by each elite resident support g_F will be $(25/5.1) \times (6098) = 29{,}892$. Elite capture at the rate of $\varphi^L = 0.20$ equals $0.20 \times [g_F - s_e(q)][M_e/N(\tau_F)] = 0.20[6098 - 2494] \times (4.6/5.1) = 650$ Rand/elite resident. The net tax burden will therefore be $29{,}892 - 650 = 29{,}242$ Rand.

12 The effect of investment was not statistically significant; we attribute the small negative coefficient as most likely due to the substantial lag between investment and economic growth.

13 For anecdotal evidence on the importance of trade sanctions, *see* Waldmeir, *supra* note 2, at 23, 56; Geoffrey Hufbauer, Jeffrey Schott & Kimberly Elliot, Economic Sanctions Reconsidered: History and Current Policy 221–48 (2d ed. 1990).

14 Source: South African Reserve Bank, *available at* www.reservebank.co.za, Time Series KBP6244J.

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