Rents, military elites, and political democracy

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Abstract

In autocratic regimes the military elite is in a position to extract rents, because without the support of the military the government is in general not able to sustain itself. In this paper, we empirically confirm the negative relation between transfers to the military and the degree of democracy for developing countries. We use an instrumental variable approach to account for the simultaneity that arises since the degree of democracy is itself a function of transfers to the military.

JEL classification: D72

Keywords: Rent seeking; Military; Autocracy; Democracy

1. Introduction

The forms taken by rent-seeking behavior 1 depend on the nature of a country's political institutions. Rent seeking accordingly takes different forms in democratic and autocratic regimes. In democratic systems lobbying of legislators can take place for different policies. In autocratic regimes, rule is in general protected by military force, and the political elite has a privileged position in rent-seeking or rent-extracting behavior which would be compromised by democracy. A negative relation is therefore suggested between transfers to the military and the degree of political democracy.

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1 See the survey of the literature by Nitzan (1994).
Empirical confirmation of this relation requires a measure of the degree of political democracy. A measure which has been previously used (see Mbaku, 1991) is an index of democracy (ID) (reported in Kurian (1991)) based on the level of political competition and the degree of electoral participation within a country. There are however significant problems with measures of democracy based primarily on election participation. In many countries elections do not take place, or governments permit elections to take place periodically, and encourage citizens to vote, but viable opposition parties do not exist and voters can only choose from candidates who belong to a state-sanctioned political party. Characteristics of a democratic society such as freedom of speech, press freedom, and fairness of elections, are also not reflected in the ID measure. The measure is therefore not sufficiently discerning: for example, most countries in sub-Saharan Africa have an ID index of zero despite the fact that they exhibit significant differences in their practice of democracy. A more discerning measure of democracy which reveals variations in the ability of national institutional frameworks to provide citizens with access to political institutions is Bollen’s political democracy index (PDI). In this paper we investigate the relation between resources allocated to the military and the degree of democracy using Bollen’s comprehensive measure of democracy for 1980 data for developing countries.

Our hypothesis is that rents to the military increase as the degree of democracy declines. However, the degree of democracy depends negatively on rents secured by the military, since the more resources the military have, the more effective is the military in holding democratic tendencies in check. Our estimation procedure addresses this simultaneity. Also, we make allowance for the fact that some countries were engaged in military conflict, which provides a separate (but not necessarily independent) motive for military expenditures.

Section 2 examines the relation between military rent-seeking activities and political democracy in developing countries. The concept and measure of political democracy are considered in Section 3 and empirical results are presented in Section 4.

2. The military, rent seeking, and political democracy

In democratic countries, where legislative oversight committees oversee allocations to the military, rent seeking by the military is confined to political lobbying. In dictatorial systems, military elites face different constraints. Rents are created and allocated by the dictator to groups supporting the ruler (Kimenyi, 1987; Mbaku, 1991). Because rents in dictatorial systems are created primarily by the

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2 See Bollen (1980), Bollen (1983), Bollen (1991), and also Bollen and Grandjean (1981) and Muller (1988).
dictator's decrees and distributed by the ruler's handpicked appointees, lobbying of legislators is not an issue.

In non-democratic systems political success tends to be highly dependent on use of force (Mbaku, 1991). Groups with a comparative advantage in violence then dominate in competition for rents, with the military coup d'état a common method of regime change (see Mbaku, 1988; Mbaku and Paul, 1989; Jenkins and Kposowa, 1990; Mbaku, 1992). Tullock (1987) observes that dictatorships are usually overthrown by high-ranking officials within the incumbent government and that in autocracies control of the armed forces is crucial for capturing and maintaining the apparatus of government.

There are a number of explanations for coups, including political development theory, military centrality theory, ethnic-antagonism perspectives, and economic dependency (Huntington, 1968; Deutsch, 1969; Jenkins and Kposowa, 1990, Jenkins and Kposowa, 1992). In this paper, we view threats of military coups as a rent-seeking tool for securing benefits for the military. In a civilian dictatorship, the military provides the coercive force needed to maintain regime security. Military leaders assure that competitive interest groups do not develop modes of behavior that are detrimental to 'state' security. Activities of such groups are carefully monitored by military elites to ensure that none develops enough violence potential to capture the government. In return for helping maintain the regime, the military receives rents via a share of government expenditures. The same applies more directly if the military has itself captured the apparatus of government through a coup and has formed a military dictatorship.

Since dictatorial regimes need the support of the military to halt attempts to overthrow the government, the military budget in non-democratic regimes may therefore reflect the government's own demand for protective services. Nevertheless, even when the threat from other opposition groups is minimal, the regime may not be in a position to reduce allocations to the military, since attempts to decrease the military budget may create discontent within the military, and destabilize the government. The regime then allocates resources to the military, not because it requires military services for its survival, but rather because there is need to buy off the military. To the extent that resources provided to the military are in exchange for some favor to the regime (helping the incumbent maintain monopoly on power) and not for some productive activity (such as preventing uprisings), such allocations are a rent or a transfer of income to the military via the government. The resources used by the military to secure and protect the income transfer constitute the military's rent-seeking outlays.

3. The concept of political democracy and its measurement

Before testing the relationship between political democracy and allocations to the military, we consider the concept of political democracy. (Lipset, 1963, p. 27)
has defined political democracy as "a political system which supplies regular constitutional opportunities for changing the government officials". This definition of political democracy stresses the importance of periodically held elections. The definition of political democracy of Dahl (1956), while emphasizing elections, includes a framework for determining the democratic nature of elections. He suggests that in a democratic election, each vote is weighted equally and all voters are given the same information on the issues or choices to be decided by the election. When the election is over, the will of elected officials should be carried out.

The proper definition of democracy according to Bollen (1980) involves recognizing "that the political power of the elite, relative to the nonelite, differs from nation to nation" (Bollen, 1980, p. 372). Differences between the political power of the elite relative to that of the nonelite determine the extent of political democracy in a country. The political democracy index developed by Bollen (1980) which we use is based on the concepts of political liberty and popular sovereignty. In each country, political freedoms endow citizens with the right "to protest or support freely government policies or decisions" (Bollen, 1980, p. 372). If society is provided with freedom of speech, a free press, and freedom of opposition, then citizens have opportunities to mobilize and protest state policies and affect government policies or decisions made by the ruling elite. In addition, political freedoms allow citizens to organize political parties and compete against the ruling elite for the capture of the apparatus of government. In those societies in which political freedoms are circumscribed, the national elite maximize their political power at the expense of nonelites. The elite also enjoy more secure property rights (Bollen, 1980, p. 372). Bollen measures popular sovereignty by fairness of elections, method of selecting the chief executive of the country, and method of legislative selection and effectiveness. The resulting index ranges from 0 to 100, with higher scores indicating greater levels of political competition in a country. Bollen (1991) has revised and updated his democracy measure, producing a PDI for 1980, which is used in this study.

4. Statistical models and regression results

To test the relationship between transfers to the military and the degree of political democracy, we estimate the following equation (the countries used in this study appear in the appendix; sample characteristics are provided in Table 1):  

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Table 1
Sample characteristics a

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Maximum</th>
<th>Minimum</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDI</td>
<td>30.16</td>
<td>11.59</td>
<td>49.92</td>
<td>-12.28</td>
<td>87</td>
</tr>
<tr>
<td>(predicted value)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOVSIZE</td>
<td>785.65</td>
<td>1756.32</td>
<td>8614.83</td>
<td>18.13</td>
<td>87</td>
</tr>
<tr>
<td>POP</td>
<td>16.15</td>
<td>26.59</td>
<td>154.00</td>
<td>0.30</td>
<td>87</td>
</tr>
<tr>
<td>POP^2</td>
<td>959.59</td>
<td>3272.92</td>
<td>23716.00</td>
<td>0.09</td>
<td>87</td>
</tr>
<tr>
<td>AGE</td>
<td>117.13</td>
<td>522.95</td>
<td>4897.00</td>
<td>6.00</td>
<td>87</td>
</tr>
<tr>
<td>AGE^2</td>
<td>284047.94</td>
<td>2570131.4</td>
<td>23980610</td>
<td>36.00</td>
<td>87</td>
</tr>
<tr>
<td>DUMMYHOS</td>
<td>0.21</td>
<td>0.41</td>
<td>1.00</td>
<td>0.00</td>
<td>87</td>
</tr>
<tr>
<td>EHOM</td>
<td>53.61</td>
<td>29.17</td>
<td>100.00</td>
<td>7.00</td>
<td>87</td>
</tr>
<tr>
<td>INCOME</td>
<td>2529.43</td>
<td>6268.64</td>
<td>42550.00</td>
<td>123.00</td>
<td>87</td>
</tr>
<tr>
<td>AREA</td>
<td>645.20</td>
<td>1069.28</td>
<td>8512.00</td>
<td>1.00</td>
<td>87</td>
</tr>
<tr>
<td>AREA^2</td>
<td>1546495.7</td>
<td>7833209.4</td>
<td>7245144</td>
<td>1.00</td>
<td>87</td>
</tr>
<tr>
<td>MILEXP</td>
<td>15.66</td>
<td>10.05</td>
<td>49.60</td>
<td>0.70</td>
<td>87</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a The variables are defined as follows: PDI is the political democracy index; GOVSIZE is the size of the central government, measured as central government expenditures per capita; POP is population, mid-1980; POP^2 is population-squared; AGE is the age of the country in 1980; AGE^2 is age-squared; DUMMYHOS is the dummy for the permanent hostility effect; EHOM is the index of ethnic homogeneity; INCOME is per capita income in 1980, in U.S. dollars; AREA is the area of the country; AREA^2 is area-squared; and MILEXP is military expenditures as a percentage of central government expenditures. S.D. is standard deviation and N stands for number of observations.

\[
MILEXP = \beta_0 + \beta_1 AGE + \beta_2 (AGE)^2 + \beta_3 GOVSIZE
+ \beta_4 DEMOCRACY + \beta_5 POP + \beta_6 (POP)^2
+ \beta_7 DUMMYHOS + u
\]

(1)

where MILEXP is military expenditures as a percentage of central government expenditures, 1980 (used as a proxy for appropriations to the military); AGE is time in 1980 from year of independence or year of establishment of the country in present form; (AGE)^2 is the latter variable squared; GOVSIZE is size of the central government, measured by central government expenditures per capita in 1980; DEMOCRACY is the measure of political democracy or competition given by Bollen's (1991) Political Democracy Index (PDI) for 1980; POP is population in mid-1980 in millions; (POP)^2 is population squared; DUMMYHOS is a dummy variable to indicate the presence of military conflict (countries in the Middle East or North Africa were assigned the value 1 plus Afghanistan, Ethiopia, Pakistan, and Somalia). \( u \) is a randomly distributed error term.

The age variable was included in the regressions to control for the period of time that a country has existed as a sovereign nation. In older and more established countries, the military establishment may be more developed and relatively more entrenched. As a result, a significant part of government expenditures would be allocated to the military. In some younger countries which have not yet been able
to develop effective institutional frameworks for popular participation, individuals seeking public office have often resorted to violence, with the military involved on one side or the other. Thus, the sign for the age variable is indeterminate a priori.

Central government expenditures are used to control for the size of the government. Larger governments are expected to spend more on the military, ceteris paribus. The variable, population, is a proxy for country size. Ceteris paribus, larger countries require bigger defense forces, and the sign for population should be positive. Endemic and permanent hostilities make for large military expenditures, hence the dummy variable (Hewitt, 1991).

Table 2
Determinants of military expenditures

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of political democracy 1980</td>
<td>-0.7888</td>
<td>-0.7999</td>
<td>-0.7473</td>
<td>-0.7567</td>
<td>-0.7880</td>
</tr>
<tr>
<td></td>
<td>(0.0440) *</td>
<td>(0.0429) *</td>
<td>(0.0477) *</td>
<td>(0.0463) *</td>
<td>(0.0399) *</td>
</tr>
<tr>
<td>Size of the central government, 1980</td>
<td>0.0002</td>
<td>0.0003</td>
<td>-</td>
<td>-</td>
<td>0.0003</td>
</tr>
<tr>
<td></td>
<td>(0.0003)</td>
<td>(0.0003)</td>
<td></td>
<td></td>
<td>(0.0003)</td>
</tr>
<tr>
<td>Population, mid-1980</td>
<td>0.2737</td>
<td>2.0353 b</td>
<td>0.2446</td>
<td>1.8305 b</td>
<td>1.9777 b</td>
</tr>
<tr>
<td></td>
<td>(0.0483) *</td>
<td>(0.3301) *</td>
<td>(0.0489) *</td>
<td>(0.3263) *</td>
<td>(0.3168) *</td>
</tr>
<tr>
<td>Population-squared</td>
<td>-0.0020</td>
<td>-</td>
<td>-0.0017</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.0004) *</td>
<td></td>
<td>(0.0004) *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of the country in 1980</td>
<td>0.0020</td>
<td>-0.0011</td>
<td>0.0037</td>
<td>0.0009</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.0070)</td>
<td>(0.0069)</td>
<td>(0.0069)</td>
<td>(0.0068)</td>
<td></td>
</tr>
<tr>
<td>Age-squared</td>
<td>-6.036E-07</td>
<td>7.748E-08</td>
<td>-9.642E-07</td>
<td>-3.598E-07</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(1.420E-06)</td>
<td>(1.392E-06)</td>
<td>(1.399E-06)</td>
<td>(1.368E-06)</td>
<td></td>
</tr>
<tr>
<td>Dummy for permanent hostility effect</td>
<td>-</td>
<td>-</td>
<td>2.5599</td>
<td>2.8381</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(1.2015) *</td>
<td>(1.1456) *</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>36.6748</td>
<td>35.9003</td>
<td>35.0887</td>
<td>34.3619</td>
<td>35.5160</td>
</tr>
<tr>
<td></td>
<td>(1.5879) *</td>
<td>(1.5603) *</td>
<td>(1.7215) *</td>
<td>(1.6609) *</td>
<td>(1.4132) *</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.8364</td>
<td>0.8435</td>
<td>0.8440</td>
<td>0.8520</td>
<td>0.8422</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.8242</td>
<td>0.8338</td>
<td>0.8323</td>
<td>0.8428</td>
<td>0.8364</td>
</tr>
<tr>
<td>F</td>
<td>68.1773</td>
<td>87.2991</td>
<td>72.1154</td>
<td>93.2477</td>
<td>147.6071</td>
</tr>
<tr>
<td>Number of observations</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
</tr>
</tbody>
</table>

* Standard errors are in parentheses. Asterisks denote statistical significance at the 5% level or better. F is the F-ratio. The dependent variable is military expenditures as a percentage of central government expenditures, 1980. Political democracy is measured by the Political Democracy Index (PDI), 1980. The dummy variable for the permanent hostility effect was assigned to countries in the Middle East, North Africa, plus Afghanistan, Ethiopia, Pakistan, and Somalia.

b Variable that has been logarithmically transformed.
Based on our proceeding discussion, we expect the relationship between military expenditures and the PDI to be negative, ceteris paribus (military expenditure is measured as a percent of central government expenditures).

While the degree of political competition affects the level of military expenditures, treating political democracy as exogenous may not be accurate. The degree of political democracy may itself depend on the level of military expenditure, since oppressive regimes remain in power by using the coercive instruments of police and the military. So the degree of political democracy influences the level of military expenditures, and inclusion of PDI as an exogenous variable can result in biased estimates. We accordingly first estimate a model for the determinants of PDI. The model is extended for the determinants of democratization presented by Kimenyi (1989), by including military expenditures among other independent variables that affect PDI. The predicted values of PDI obtained from the estimation are then used as an instrument for determination of transfers to the military, which eliminates the causality problem that emerges when actual values of PDI are used as independent variables.

The model was specified as

\[ PDI = f(MILEXP, EHOM, POP, AGE, INCOME, AREA) \] (2)

where, \( AREA \) is area of the country in thousands of square kilometers in 1980; \( EHOM \) is an index of ethnic homogeneity; and \( INCOME \) is real per capita income in U.S. dollars in 1980. Other variables are as defined previously.

If oppressive governments remain in power by the use of the military as suggested above, we expect a negative relationship between the PDI and military expenditures. Countries with heterogeneous populations tend to be less democratic (see for example Kimenyi (1989)). Countries which are economically advanced tend to more democratic. We also include population and area to control for the size of the country: large countries may be more difficult to govern and thus may be expected to have lower values of political democracy, other things equal. The effect of age on political democracy, as noted, is ambiguous a priori.

Estimating Eq. (2) using OLS regression yielded the following results:

\[
PDI = 41.1236 - 1.1025 \times MILEXP + 0.0249 \times EHOM + 4.2731 \times \ln POP - 0.0016 \times AGE + 0.0002 \times INCOME - 0.0048 \times AREA.\]

(3)

Standard errors are in parentheses. The asterisks (*) denote significance at the 1 percent level.

Military expenditures and population appear as important determinants of the degree of political democracy. This confirms that including the PDI in the model for the determinants of military expenditures would result in biased estimates. We therefore use the predicted values of PDI obtained above as an instrumental variable to deal with the codetermination problem.
Regression results for the determinants of military expenditures are reported in Table 2. The coefficient of political democracy is negative and significant in all five specifications. The results are consistent with our predictions. Resource allocation favoring the military compromises democracy.

The dummy variable has a significant impact on military expenditures. The positive relationship simply confirms the expectation that countries in hostile environments have large military budgets.

The coefficient of the variable age is positive, but insignificant at the 5 percent level. The coefficient of the variable age-squared is negative but also insignificant at the 5 percent level. Age of country thus does not appear to affect appropriations to the military.

The coefficient for population is positive and significant at the 5 percent level, confirming that larger countries have greater military expenditures. The negative and significant coefficient for population-squared indicates a population threshold beyond which resource flows to the military rise at a decreasing rate.

5. Conclusion

Our results confirm the existence of a negative relationship between military expenditures and democracy in developing countries. An implication is that as long as military elites retain their influence, development programs by international agencies can be expected to have limited success.

An influence taken as exogenous in our study is superpower rivalry. In the early 1990s, the collapse of the Soviet Union resulted in military-backed third-world dictatorships losing their strategic importance. As a consequence, in some countries there has been increased democratization (see Decalo, 1992; Vanhanen, 1992).

Acknowledgements

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Appendix A

This study is based on data for developing countries listed below. As is evident from the list, some are democracies, some exhibit some elements of democratic
decision making, some are monarchies, and some are outright dictatorships. The countries are: Afghanistan; Algeria; Argentina; Bahrain; Bangladesh; Benin; Bolivia; Botswana; Brazil; Burkina Faso; Burma (Myanmar); Burundi; Cameroon; Central African Republic; Chad; Chile; Colombia; Congo; Dominican Republic; Ecuador; Egypt; El Salvador; Equatorial Guinea; Ethiopia; Fiji; Gabon; The Gambia; Ghana; Guatemala; Guinea; Guinea-Bissau; Guyana; Haiti; Honduras; Indonesia; Iran; Iraq; Ivory Coast (Côte d’Ivoire); Jordan; Kenya; South Korea; Kuwait; Laos; Lebanon; Lesotho; Liberia; Libya; Madagascar; Malawi; Malaysia; Mali; Mauritania; Mauritius; Morocco; Nepal; Nicaragua; Niger; Nigeria; Oman; Pakistan; Panama; Paraguay; Peru; Philippines; Saudi Arabia; Senegal; Sierra Leone; Somalia; Sri Lanka; Sudan; Swaziland; Syria; Tanzania; Thailand; Togo; Trinidad and Tobago; Tunisia; Turkey; Uganda; United Arab Emirates; Uruguay; Venezuela; Arab Republic of Yemen; People’s Democratic Republic of Yemen; Zaire; Zambia; and Zimbabwe.

References

Huntington, D., 1968, Political order in changing societies (Yale University Press, New Haven, CT).
Muller, E.N., 1988, Democracy, economic development, and income inequality, American Sociological Review 53, 50–68.