This article examines whether budget allocations to nondefense programs in Argentina between 1961 and 1982 are dependent on the share to defense, the political regime, or both. Multiple regression equations are estimated and include the defense share, two control variables, and political dummies to test for changes in the intercept and slope of the equation as the regimes change. Regimes are differentiated between (a) the first civilian and first military (b) the Peronists, and (c) the second military.

CONSEQUENCES OF MILITARY AND CIVILIAN RULE IN ARGENTINA

An Analysis of Central Government Budgetary Trade-Offs, 1961-1982

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One of the major debates in the literature focuses on whether budget allocations, economic performance, policy outcomes, and the like change significantly with changes in political regimes. To date, there are about an equal number of studies concluding that significant change does take place as there are studies suggesting the opposite. This research has been criticized on two major points. First, the preferability of employing cross-national data or time-series data has been argued at length. In a major study on Latin America, Remmer (1978) noted that the latter is more appropriate:

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> The erratic growth pattern of Latin American countries also raises questions about the findings of cross-national studies of regime impact. A "snapshot" approach or examination at a single point in time may provide very misleading evidence (1978: 46).

Remmer went on to point out that while cross-national comparisons are still useful, time-series case studies deserve greater attention. More recently, it has been suggested that "the cross-national regime type-performance field of study may have outlived its usefulness" (Grosse, 1982: 546).

The second drawback of previous research has been directed at the use of a simple civilian/military dichotomy to test for significant change as regimes vary (see Grindle, 1986: 5). As Weaver pointed out (1973: 93-95) this classification system might also obscure any possible overlap between the regimes. In the same vein, there has been some criticism of studies that lump all military regimes together as one. As noted by Remmer (1985: 47):

> Obviously, military regimes do not form a homogeneous group. Military governments are reformist as well as conservative, populist as well as authoritarian, and personalist as well as corporatist. By aggregating all types of military regimes together, research to date has ensured that differences in regime type will appear irrelevant.

The purpose of this article is to examine central government budgetary allocations between 1961 and 1982 for one country, Argentina. This country has been selected for analysis due to the availability of recently published data (World Bank, 1985: 334-335) that lists budget allocations for all central government functions for the entire 20-year period. Furthermore there have been distinct changes in political regimes in Argentina since 1961 that permit us to differentiate among types of military regimes and types of civilian regimes thereby also accounting for the overlap suggested above by Weaver. Following a review of the literature, initial regression equations are estimated to examine the trade off between the share of the budget allocated to defense (the independent variable) and the share allocated to 13 functional categories (the dependent variable). Control variables are included in the equations to control for cyclical patterns and long-run secular trends in the data. For each functional category two additional

equations are estimated to test for any significant change (both in the intercept and slope of the relationship) in the allocations as regime changes occurred.

REVIEW OF THE LITERATURE

As early as 1963, Eckstein (p. 1012) suggested that:

> governments are either stingy or they're spenders, and if they're stingy about defense, they're stingy about everything. I would say that the historical record suggests that the association between civilian spending and military spending is positive, not negative.

In one of the earliest statistical studies, Schmitter (1971) examined the consequences of different regimes in Latin America. He concluded that budgetary allocations were partially explained by regime types, the outcomes were not. In one of the few single country studies in Latin America or elsewhere Hayes (1975) focused on Brazil between 1950 and 1967. She found that military spending did not have the anticipated negatives consequences in that country and that military governments did not exacerbate the relationship between military spending and economic development. In fact, she concluded that "military and civilian regimes may be quite similar on the issue of growth and this similarity is reflected in their spending policies" (1975: 50).

Ames and Goff (1975) focused on allocations to education and defense as regimes changed in Latin America between 1948 and 1968. They found that their measures of political variables did little to predict levels of education or defense. Moreover economic variables were found to be superior predictors. A year later, McKinlay and Cohen (1976) reported on their analysis of the economic performance of all military regimes between 1951 and 1970. They found that:

> the main parameters of absolute economic performance are set by the existing levels of development and previous levels of economic performance.... While the evidence indicates that military regimes are more likely to perform better than their preceding civilian regimes, this finding is not universally true. Unfortunately there is little about the form of the coup or the structure of the military regime that can explain the variation in the levels of economic performance (1976: 309-310).

Jackman examined 77 developing countries between 1960 and 1970 and concluded that a change to a military regime has little effect on social change, "regardless of either the level of economic development or geographic region" (1976: 1096). In the same year, Dickson (1976: 341) reported his preliminary conclusions based on a study of 10 Latin American countries. He found that military regimes tended to be more fiscally conservative (for instance, run lower deficits) and spend more on defense. Civilian regimes on the other hand were more oriented toward economic development and education.

In summarizing the research so far, Remmer (1978: 41-42) noted that:

> The empirical studies of regime type, public policy, and policy outcomes conducted so far, whether focused on Latin America or including other areas as well, tend to support the conclusion that regime differences have little or no impact on public policy.

She suggested that it was the specific economic characteristics of the country that dictated relative performance and not the type of regime.

King (1981) suggested that the appropriate "performance measures" were material equality and welfare. He found that certain democratic regimes such as Malaysia and Sri Lanka had outperformed bureaucratic-authoritarian (B-A) regimes such as the Philippines and Indonesia. A year later in a review of King's work, Grosse (1982: 543) argued that the "causal relation running from political democracy to lessened inequality is flawed on several counts and that... there is no evidence of an association between democracy and lessened inequality or between authoritarianism and heightened inequality."

Verner (1983) concentrated on budgetary trade-offs between defense and education in 18 Latin American countries between 1948 and 1979. In all countries except El Salvador he found that increased spending on defense did not lead to cuts in education. He concluded that "explanations for particular defense/education-spending trade-offs are largely country, time, or regime specific; perhaps no one explanation or model will be able to account for budgetary trade-offs for the Latin American region as a whole" (1983: 88). Two years later, Cohen (1985) compared the economic growth rates of B-A and democratic regimes in Latin America and examined the hypothesis that a B-A regime might spur economic growth at some late stage of the industrialization process. He found that B-A regimes "are somewhat more effective: Their contribution to the average annual growth rate has exceeded that of the

Colombian democratic regime by half a percent" (1985: 133). He cautioned that while this was a significant contribution to growth, there were possible concomitant costs such as the suspension of democratic practices.

As noted above, Grindle suggested that the usually adopted military/civilian regime classification was inappropriate and possibly the cause for the lack of any clear statistical relationship between regime and welfare in Latin America. Instead she proposed that characteristic patterns of civil-military relations be used instead. However, she found that:

> the distinctions about civil-military relations . . . do not emerge as strong factors in explaining military expenditures. Instead the relationship between patterns of growth of military expenditures and regime tenure is generalized across all types of civil-military relationships for the period considered, a finding not anticipated (1986: 15).

METHODOLOGY

As noted, the focus of this article is to examine whether budgetary allocations to various functional categories of the central government in Argentina are dependent on the defense allocation, the political regime, or both. The initial estimated equations for each function test for a statistical relationship between the defense share (the independent variable) and the other functional category share (the dependent variable). In addition these initial equations included two control variables. The deficit/Gross Domestic Product ratio was included to control for the cyclical relationship between the budget and the share to defense, and either the per capita government expenditure or per capita income were included to control for the long-run secular movement in the defense budgetary shares. This approach was suggested by Verner (1983: 81). In other words, we have attempted to exclude some of the correlation between the defense share and the respective control variables.

Since the amount allocated to General Administration for example is not likely to simply be a function of the defense share, the equations were reestimated after including dummy variables to account for regime

TABLE 1
Argentina, Political Dummy Variables, 1961-1982

YEAR	DUMMYE	DUMMYF
1961	1	1
1962	1	1
1963	1	1
1964	1	1
1965	1	1
1966	2	1
1967	2	1
1968	2	1
1969	2	1
1970	2	1
1971	2	1
1972	2	1
1973	0	0
1974	0	0
1975	0	0
1976	3	2
1977	3	2
1978	3	2
1979	3	2
1980	3	2
1981	3	2
1982	3	2

type. Since 1961 there has been four distinct regimes: 1961-1965 the first civilian regime, 1966-1972 the first military regime, 1973-1975 the second civilian regime (Peronists), and 1976-1982 the second military regime (Budget-Authoritarian). These will be referred to as CIV1, MIL1, CIV2, and MIL2, respectively. As suggested by some scholars above, a simple schema based solely on a civilian/military dichotomy is likely to be misleading. Our initial regression equations (discussed below) confirmed this result.

Seven additional classification systems were tried—for example combining MIL1 and MIL2.[1] The two classifications of dummy variables that resulted in the best statistical pattern below were DUMMYE and DUMMYF—see Table 1. DUMMYE distinguished

between all four regimes. The Peronists (CIV2) were assigned a value of 0 as they were least likely to cut back other expenditures as the defense share increased. For similar reasons, CIV1 was assigned a value of 1, MIL1 a value of 2, and MIL2 a value of 3. DUMMYF on the other hand considers CIV1 and MIL1 as basically similar reflecting the possibility that the military personnel in MIL1 heavily influenced the CIV1 regime. This supports the classification suggested by Grindle (1986: 4). While there are only subtle differences between MIL1 and CIV1, major differences exist between CIV2 and MIL2. Once again the Peronists were assigned a value of 0.

The following section presents and interprets the regression results. We have purposely reported only those equations that include DUMMYF since the results were superior to those that employed DUMMYE in all cases.

EMPIRICAL RESULTS

The estimated regression results appear in Table 2. Since we are testing to see whether regime changes in Argentina significantly alters the defense and nondefense tradeoffs the magnitude of the estimated coefficient is of limited interest; inasmuch as we have reported only the t-values.[2] The results are grouped by 5 main functions and 8 sub-functions. The first equation in each group represents the initial equation with only the defense share and the control variable on the right-hand side. The second and third equations introduce DUMMYF and DUMMYFX, respectively.

The inclusion of DUMMYF tests for a significant change in a programs' share for a *given* level of defense as the regimes change; that is, we examine whether or not the intercept has shifted significantly. An alternative way a political change could alter the relationship between defense and nondefense programs is through a change in the slope of the equation. DUMMYFX (DUMMYF times the defense share) tests for this change. A statistically significant t-value indicates that important cutbacks (or increases) take place with *changes* in the defense share—the marginal propensity to spend on other programs is altered.

For the most part, the results in Table 2 indicate that when regimes change alterations in the defense share take place at the expense of other

TABLE 2

Argentina: Impact of Regime Change on Defense and Nondefense Budgetary Trade-Offs, 1961-1982

CATEGORY	Defense Share	CONTROL VARIABLES: Deficit/GDP	CONTROL VARIABLES: Per Capita Govt Expend	CONTROL VARIABLES: Per Capita Income	DUMMY VARIABLES: DUMMYF	DUMMY VARIABLES: DUMMYFX	STATISTICS: R^2	STATISTICS: F	STATISTICS: DW	
GENERAL ADMIN	(-3.11)	(5.49)		(-1.10)			.66	9.82	1.68	(1)
	(-1.00)	(3.97)		(-0.80)	(-2.77)		.77	13.33	1.95	(2)
	(-0.38)	(3.86)		(-0.45)		(-2.78)	.77	13.62	1.95	(3)
DOMESTIC SECURITY	(2.53)	(1.49)	(2.30)				.43	3.78	1.62	(4)
	(2.88)	(1.29)	(2.56)		(-1.28)		.48	3.70	1.70	(5)
	(2.42)	(1.36)	(2.39)			(-1.00)	.46	3.43	1.69	(6)
TOTAL SOCIAL EXPENDITURES	(-1.31)	(-1.11)		(2.11)			.25	1.66	1.70	(7)
	(1.04)	(2.52)		(0.84)	(-7.52)		.88	28.39	2.03	(8)
	(1.84)	(2.17)		(1.44)		(-6.33)	.84	20.25	1.90	(9)
a. Education	(-1.21)	(-0.44)		(1.25)			.13	0.77	1.54	(10)
	(1.15)	(4.40)		(-1.46)	(-8.17)		.89	30.91	2.22	(11)
	(2.91)	(4.40)		(-0.45)		(-7.49)	.88	29.23	2.11	(12)
b. Health	(0.47)	(0.88)		(-0.37)			.06	0.33	1.88	(13)
	(2.31)	(5.07)		(-3.89)	(-6.79)		.92	42.90	1.97	(14)
	(3.82)	(5.40)		(-3.28)		(-8.23)	.95	69.48	2.02	(15)
c. Social Security/Welfare	(1.66)	(0.06)	(2.26)				.31	2.29	1.60	(16)
	(1.93)	(-0.12)	(2.46)		(-0.99)		.35	2.14	1.68	(17)
	(1.61)	(-0.05)	(2.23)			(-0.64)	.33	1.94	1.65	(18)
d. Housing	(-2.68)	(-0.34)	(-1.35)				.34	2.57	1.94	(19)
	(0.11)	(-2.50)	(-0.36)		(-4.80)		.83	18.96	2.10	(20)
	(0.65)	(-2.07)	(0.01)			(-3.43)	.72	14.08	1.97	(21)

(continued)

TABLE 2 Continued

CATEGORY	Defense Share	CONTROL VARIABLES Deficit/ GDP	Per Capita Govt Expend	Per Capita Income	DUMMY VARIABLES DUMMYF	DUMMYFX	STATISTICS R^2	F	DW	
	(-0.64)	(2.92)	(-5.21)				.85	28.81	1.98	(22)
ECONOMIC	(-1.23)	(3.30)	(-4..33)		(0.97)		.82	18.06	1.90	(23)
DEVELOPMENT	(-1.39)	(3.14)	(-4.22)			(1.13)	.82	17.93	1.89	(24)
	(1.53)	(1.31)	(-0.76)				.34	2.61	1.97	(25)
a. Transporta-	(1.00)	(1.20)	(-0.74)		(1.26)		.41	2.75	1.65	(26)
tion	(0.44)	(1.01)	(-0.85)			(1.59)	.44	3.10	1.57	(27)
				(-2.49)			.66	9.71	1.94	(28)
b. Agriculture	(-0.43)	(4.25)		(-2.08)	(-4.15)		.61	6.28	1.72	(29)
	(2.56)	(1.81)		(-1.86)		(-4.73)	.67	8.13	1.71	(30)
	(3.48)	(2.11)					.74	13.88	1.77	(31)
			(2.73)				.81	16.54	1.96	(32)
c. Energy and	(-0.01)	(-2.31)	(0.40)		(4.00)		.80	15.64	1.93	(33)
Fuels	(-3.39)	(-1.56)	(-0.01)			(3.66)				
	(-3.41)	(-1.73)					.24	1.62	2.06	(34)
				(-1.79)			.95	74.05	1.96	(35)
d. Other	(0.69)	(1.94)		(-9.66)	(-4.13)		.95	81.08	1.98	(36)
Economic	(2.01)	(6.41)		(-9.27)		(-4.29)				
Development	(2.59)	(6.41)					.41	3.49	1.56	(37)
				(-1.79)			.92	47.48	1.88	(38)
DEBT	(-1.15)	(-1.30)		(-0.02)	(7.52)		.89	32.80	1.80	(39)
SERVICING	(-3.61)	(-4.74)		(-0.69)		(6.16)				
	(-3.75)	(-4.16)								

NOTE: Values in parentheses are t-statistics. A value of 1.7 indicates that the estimated coefficient is statistically different from 0 at the 90% level of confidence, a value of 2.1 at the 95% level, and 2.9 at the 99% level.

government functions (that is, t-values for DUMMYF and DUMMYFX are statistically significant). Second, the results indicte that intercept shifts and slope changes are equally important (similar t-values). Third, in a majority of cases, there is a marked increase in the R^2 value as the two dummy variables are introduced. In those cases where there is a minor change in the R^2 value, the coefficients of the dummy variables are not significant (for example, Domestic Security). Fourth, it appears that economic programs (Social Security, Total Economic Development, and Transportation) are not affected nearly as much by political change as are other programs.

With respect to specific programs, there is a significant trade-off (high negative t-value) between defense and seven other functions when the political dummy variables are included (General Administration, Total Social Expenditures, Education, Health, Housing, Agriculture, and Other Economic Development). In two cases, Energy and Fuels and Debt Servicing, there is a complimentary relationship between the program's share and the regime change. It appears that the military regimes favor these programs although one can argue that since little debt existed in the 1960s and 1970s, any regime would have faced debt-servicing problems following the increased borrowing of MIL2.

Thus in most cases, by adding political variables (that is, weighting the defense share with a political variable) the results are quite different from those initially obtained. In other words, a spurious correlation between defense and nondefense programs can easily be obtained if political change is ignored—see equation 1 for example. The exceptions seems to be for Domestic Security and Social Security. With regard to the former (equations 4, 5, and 6) the R^2 is almost identical and the t-values are not statistically different from zero. The t-values for the defense share remain above 2.4. This is interpreted as a reflection of a high correlation between Defense and Domestic Security. In the case of Social Security the results are surprising and are contrary to the belief held in the literature that military regimes cut back this type of program. Our results indicate that Social Security is not manipulated at the expense of defense. However this point deserves a more indepth study on, for example, the composition of the benefits rather than the total value of the benefits. Mixed results were obtained for Agriculture. While the t-values become significant for defense and the political regimes as the dummies are introduced, there is little change in the R^2 value. Once again, this specific program is worthy of decomposition and further study.

CONCLUSIONS

The analysis presented above indicates the critical role political change has played in shifting Argentinian budget priorities particularly with regard to the changing shares of nondefense items. Without taking regime type into account, few statistically significant budgetary trade-offs between defense and nondefense programs can be identified. With regime change introduced into the analysis a number of significant budgetary patterns can be identified. These patterns are capable of extending our understanding of overall priorities associated with different political groupings.

The results indicate that a simple dichotomy between civilian and military governments provides few insights to Argentina's budgetary allocation process. In addition, the military regimes show great differences in their budgetary priorities. Some military regimes may have priorities more like some civilian governments than other military regimes. Furthermore, civilian regimes also differ greatly from one regime to the next.

While any forecast of future budgetary allocations is risky even if one were to know the regime ahead of time, several tentative conclusions can be drawn from this study. It appears that military regimes are more likely to give priority to economic development and debt servicing and accumulation. Civilian regimes on the other hand are more likely to cut military spending as a means of expanding social programs, especially in the areas of education, health, and housing. Contrary to initial expectations, the share of the budget allocated to social security is extremely stable relative to changes in defense spending as regimes change. Perhaps military regimes are unwilling to risk alarming segments of the population by cutting these programs whereas civilian governments find it more popular to expand social programs. The military does not appear to favor its major supporters—the rural oligarchy and business. Agricultural allocations are at best marginally increased by military regimes and may even be reduced.

NOTES

1. Available from the authors on request.
2. The full set of equations (including DUMMYE and DUMMYF) with the estimated coefficients can be obtained on request. A t-value of 1.7 indicates that the estimated coefficient is statistically different from zero at the 90% level, 2.1 at the 95% level, and 2.9 at the 99% level.

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