

# **Military Expenditure, Economic Performance, and Political Economy of Conflict Resolution in Greece and Turkey**

by

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*Abstract:* This article contains an overview of the literature on the economics of military affairs in Greece and Turkey as of December 1999. In particular, I review (a) arms race models, (b) models of the demand for military expenditure, (c) models measuring the economic impact of military expenditure, and (d) macroeconomic simulations that model reductions in military expenditure. I conclude with some thoughts on the political economy of conflict resolution between and within Greece and Turkey.

# **Military Expenditures, Economic Performance, and Political Economy of Conflict Resolution in Greece and Turkey**

## **Introduction**

The purpose of this article is twofold. First, I summarize in non-technical language some of the more relevant contributions to the literature on the economics of military affairs in Greece and Turkey (as of December 1999). This is done by grouping the contributions into categories that address four questions: (1) is there, or was there, an arms race between Greece and Turkey? (2) what are the factors that drive the demand for military expenditure in the two countries? (3) what is the impact of military expenditure on the economies of the two countries? and (4) what would be the economic effect if the two countries reduced their respective military expenditure? Second, I address the political context and take a brief look at prospects for conflict resolution between and within the two countries.

## **Question 1: an arms race between Greece and Turkey?**

The arms race literature on Greece and Turkey – there are six pieces<sup>1</sup> – has produced mixed results. Some authors find the definite presence of an arms race, others – equally definitely – do not, and still others find weak, if any, evidence of an arms race between the two countries. The competing findings must be evaluated on technical and conceptual merits, extensive details on which may be found in Brauer (2001b).

On the technical, i.e., econometric, merits, the best contribution is the work by Kollias and Makrydakis (1997b). This includes an excellent line-graph that displays the logarithms of the levels of Greek and Turkish military expenditure from 1950-1995 (these are annual data from various SIPRI yearbooks, expressed in constant 1985 US-dollar). From 1950 to 1966 both lines increase in parallel fashion, where the line that indicates Greek military expenditure is at a lower level than is Turkey's. For the years 1967 and 1968, the line for Greek military expenditure catches up with the line for Turkey, thereby marking a structural break in the data series. From then on until 1985 Greek and Turkish levels of military expenditure continue to rise but coincide with each other almost perfectly. And as from 1986, another visually clear structural break occurs: whereas Turkey's military expenditure continues to rise, Greece's stays

almost perfectly flat so that the disparity between Greek and Turkish military expenditure grows in Turkey's favor. The complex statistical analysis then merely confirms what the figure makes amply clear already: Greece's and Turkey's military expenditure were "cointegrated" until 1985 – meaning, they tended to move together – but not thereafter. If there was an arms race, it stopped in 1985.

But in addition to the econometrics, there are at least two other important considerations one must think about before accepting this result too quickly. One concerns the underlying data used in the various analyses; the other concerns the way scholars mathematically model the presence or absence of an arms race. The first issue – that of data – is brought out in the paper by Dunne, Nikolaidou, and Smith (1999). Redrawing the Kollias and Makrydakis figure for military expenditure in Turkey and Greece from 1960-1996 (see Dunne, Nikolaidou, Smith, 1999, p. 7), some astonishing differences emerge.<sup>2</sup> For instance, the first structural break occurs not in 1967 and 1968 but rather from 1966 to 1974, and the second structural break occurs not in 1986 but in 1989/90. Moreover, in the data display by Dunne, Nikolaidou, and Smith, the level of Greek military spending is higher, sometimes drastically higher, than that of Turkey from 1966 to 1975, but in the figure by Kollias and Makrydakis the lines for military spending of the two countries are nearly equal and cross each other twice. Why do these substantive differences arise? The only identifiable reason is that Kollias and Makrydakis used SIRPI data indexed to constant 1985 US-dollars, whereas Dunne, Nikolaidou, and Smith used SIPRI data indexed to constant 1990 US-dollars. If a change in the base-year by a mere five years leads to such drastic differences in the time-series of military expenditure for Greece and Turkey, one wonders about the validity of the statistical results.<sup>3</sup> Indeed, after applying an array of sophisticated statistical techniques, Dunne, Nikolaidou, and Smith are unable to find convincing evidence of an arms race between Turkey and Greece: "... there is some evidence of cointegration in Greece and Turkey," they write (p. 14) "but not in the form of a long run arms race. The results we get are difficult to interpret and extremely sensitive to minor features of the specification."

I conclude that if there was an arms race between the two countries it ended somewhere in the mid- to late-1980s. The most likely reason, although this has not been separately investigated, is economic exhaustion in Greece whose economy relies on the labors of a non-growing population of a little more than 10 million people, whereas Turkey's economy was able to draw on the labors of a rapidly growing population that now reaches about 70 million people.

A second consideration in evaluating the findings of arms race models concerns the mathematics of the modeling and consists of two sub-questions: (a) what variables shall

be included? and (b) how shall these variables be represented? Regrettably, arms race modeling is not a particularly advanced discipline. The models in the literature under review essentially say that Greece's military expenditure depends on Turkey's military expenditure, and *vice versa*. Causality must run both ways, from Greece to Turkey *and* from Turkey to Greece, simultaneously and mutually. All authors agree on this point of mutual, simultaneous causation. But an arms race can also exist if country A continuously tries to catch up with country B while country B's military expenditure does not depend on country A at all but on some other factors. It would be an arms race with one-way, unilateral rather than mutual, simultaneous causation. For example, it would seem quite respectable, at least from Turkey's point of view, to argue that Turkey's military expenditure does not depend so much on Greece's, but on a host of other security concerns (Central Asia, Syria, Iran, Iraq, and internal security problems). The current arms race models would not pick up on this reasoning since the mathematics is restricted to view both countries exclusively in their relation to each other, as if the other factors were entirely irrelevant.

The second sub-question – how shall the arms race variables be represented? – gains importance for the empirical testing of the mathematical model. To be brief (details are in Brauer, 2001b), the fundamental question is: shall one represent a country's military expenditure in *level* form (the actual Greek drachma or Turkish lira spent) or in *share* form (military expenditure as a share of the countries' respective GDP)? In the literature, both approaches are used but only the first is conceptually correct. This is so because a country can only feel threatened by the amount of actual military expenditure the other country undertakes (or, rather, by the presumed effectiveness that a certain amount of military expenditure represents); a country cannot feel threatened by a ratio of military expenditure to GDP (ME/GDP). The single-most striking example to illustrate the validity of this point is that in 1980 Turkey's actual military expenditure *decreased* while its ME/GDP ratio *increased*. This occurred because in 1980 Turkey suffered a severe recession so that the denominator of the ME/ GDP ratio fell faster than the numerator. Thus, the ratio increased while ME decreased. Clearly, Greece cannot have felt threatened by a rising ratio when Turkish military expenditure actually fell.

In sum, there are three criteria by which to evaluate an arms race model: the mathematics of the model that determines the variables in an abstract form (e.g., military expenditure), the way the variables are econometrically implemented (e.g., levels or shares), and the data used (e.g., SIPRI 1985-based or SIPRI 1990-based data). All six pieces suffer from the essential difficulties of mathematical modeling, and this aspect of the literature requires more thought and work; only two pieces use the

proper implementation (i.e, levels of military expenditure), but use different data (base-years). One piece finds an arms race between Greece and Turkey that stopped in 1985; the other finds at best weak evidence for an arms race, but one that stopped in the late 1980s.

## **Question 2: what factors determine the demand for military expenditure in Greece and in Turkey?**

I found nine papers on the demand for Greek military expenditure and four papers on the demand for Turkish military expenditure (two papers treat both countries).<sup>4</sup> With respect to the papers on Greece, these evolved and have become more realistic over time. For example, the earliest work merely treated Greek military expenditure as a function of Turkey's. Then, armed force ratios and military expenditure per soldier are added to the models, but still only for Greece and Turkey. Then, to capture so-called "spin-in" effects, US and NATO military spending are added. Finally, Greece's GDP is added to learn if economic prowess might also be a determinant of military expenditure. Still, although the models have improved, they are not yet convincing. For example, security concerns other than over Turkey are rarely modeled in the equations for Greece. Surely, this is inadequate as Greece has faced numerous non-Turkish concerns such as the 1944-1949 Greek civil war, its joining of NATO in 1952 and the military role that NATO assigned to Greece on NATO's southern flank, the Soviet threat via Bulgaria, the military government from 1967-1974, and, post-1989, the conflagrations in the Balkans. None of the models captures the richness of Greece's security concerns. From an economist's point of view, the models are improving; from a political scientist's point of view, the economists are not quite there yet.

Two papers warrant a brief discussion here (the others are covered in detail in Brauer, 2001a). They are Refenes, Kollias, and Zapranis (1995) and Avramides (1997). The first is novel and interesting as it applies a neural-network model to data for 1962-1990. Its purpose concerns the predictive power of neural network modeling as compared to regression analysis, both in forecast errors and turning-point errors. The study concludes that the least-squares error of the neural network "is much better than [in the] regression, but more important is the fact that the neural network is capable of predicting directional changes far more accurately than the regression" (p. 35). But the regression to which the neural network is compared is not a convincing mathematical representation of Greece's security concerns. Indeed, the regression diagnostics are poor. For example, even though p-values are not reported, not one of the independent variables appears statistically significant (i.e., the t-values are relatively

small) and there is likely a fair amount of uncorrected multi-collinearity among the independent variables. Thus, the neural network model performs better but perhaps only because it is pitted against a poor competitor.

The paper by Avramides (1997) breaks new ground in that it derives a military expenditure function from economic principles rather than from *ad hoc* reasoning that had characterized the literature hitherto. Moreover, it also is a technically very advanced paper. But it suffers from two regrettable short-comings. First, on the question of the impact of Turkish ME/GDP on Greek ME/GDP, the table that reports the estimates (table 4, p. 174) contains a misprint and therefore leaves an important substantive question undecided.<sup>5</sup> Second, Avramides' data period covers 1950 to 1989 and therefore leaves us completely uninformed as to the post-cold war situation: what are the factors that drive demand for military expenditures in Greece in the 1990s and beyond? To be blunt: we do not know.

Regarding the papers on Turkey, I find a similarly unfortunate outcome. The best of the four papers (Chletsos and Kollias, 1995b) runs into interpretative difficulties on heavy-duty technical grounds (for details see Brauer, 2001b) but even if one is willing to either ignore those or simply to accept the authors' interpretation, note that the time-period covered ends in 1992. This means that, just as for the case of Greece, we know virtually nothing about the factors that drive demand for Turkish military expenditure in the 1990s and beyond!

Clearly, it would be highly beneficial for political scientists and economists to combine their respective skills and to produce a model with up-to-date data that passes econometric muster but is also politically informative. For example, if we take Avramides' findings at face value – that Greece's military expenditures follow Turkey's – then identifying the drivers of Turkish military expenditure would be important for Greek military policy and budget planners. And if we found that Turkish military expenditure is driven as much by NATO commitments, fears of Islamic fundamentalism, and the desire to suppress Kurdish militants as by disagreements with Greece, it might help make the case for reduced Greek military outlays as at least some Turkish military expenditure is not aimed, and perhaps cannot even be deployed, against Greece. I am speculating of course but in so doing indicate that an understanding of Turkish military outlays is important not just for Turkey.

### **Question 3: what is the economic impact of military expenditure in Greece and in Turkey?**

I identified eleven papers on Greece and four on Turkey (one paper addresses both

countries).<sup>6</sup> As before, details and technical discussion may be found in Brauer (2001a; 2001b). I focus here on particularly germane papers. As regards Greece, four researchers (Kollias and Sezgin as against Antonakis and Dunne/Nikolaidou) arrive at exactly opposite findings. Kollias (1994) started the discussion with a single-equation model that produced a positive coefficient of military expenditure on economic growth. This was superseded with a richer, simultaneous-equations model by Antonakis (1996). He finds that a one percentage point increase in Greek ME/GDP reduces its economic growth rate by about 1.1 percentage points (p. 342). In an expanded model (Antonakis, 1997a), however, this negative effect is reduced to only 0.4 percentage points (p. 96). Then Sezgin (2000a) published a paper disputing Antonakis' findings even though he uses a comparable model structure (but different variable implementation, *levels* as opposed to *shares*). Regrettably, while the coefficient of the level of military expenditure on economic growth is positive in the economic growth equation, Sezgin does not report the *net* effect of military expenditure on economic growth across the various feedback effects stemming from the entirety of his simultaneous equations. Finally, Dunne and Nikolaidou (1999) also apply a simultaneous-equations model and find a negative net effect but of rather modest size: increasing ME/GDP by one percentage point reduces the inflation-adjusted GDP growth rate by 0.026 percentage points.<sup>7</sup> How does one fairly summarize these findings? I would say that Antonakis' papers clearly superseded Kollias' work. Antonakis finds a negative effect of Greek military expenditure on its growth rate, but this effect becomes smaller in his subsequent work. Sezgin finds a positive effect but does not report the crucial *net* effect, and Dunne and Nikolaidou find a negative effect, but much smaller than the smallest found by Antonakis. Pending further work, we may tentatively conclude that the impact of military expenditure on Greek economic growth is probably negative and probably of rather small magnitude, a conclusion that is corroborated by the macroeconometric peace dividend modeling reported further on in this article.

As regards Turkey, the more interesting papers are those by Sezgin (1997) and Özsoy (2000). Both employ a so-called Feder-Ram production function model (Feder, 1983; Ram, 1986; Biswas and Ram, 1986). While the model possesses some attractive features, and has therefore found widespread application in the field, Sandler and Hartley (1995, pp. 206, 208-209) describe how this type of model is mathematically structured to find positive contributions of military expenditure to economic growth. And that is exactly what these two studies find. This makes them dubious *a priori*: for what have we found if a model inherently is set up to find what we found?

What are the findings? Apart from the variables of immediate interest, i.e., those related to the military sector, what is striking is that in both cases *physical investment* (the replacement and replenishment of physical capital) turns out to be statistically insignificant.<sup>8</sup> *Labor* also turns up statistically insignificant in Özsoy's case, but positive and significant in Sezgin's paper. *Human capital* is statistically insignificant in both papers. A production function model – for any country – in which investment, labor, and human capital nearly all turn out to be statistically insignificant raises doubts about the model and/or the underlying data.

Given these observations, both papers find a positive, and statistically significant, overall effect of the Turkish military sector on Turkish economic growth for the time period 1949-1993 in Sezgin's case and 1950-1992 in Özsoy's case. In addition, Sezgin finds a statistically significant and negative spill-over effect from the military to the civilian sector and also computes a negative factor-productivity differential (meaning that the military sector is less productive of economic growth than is the civilian sector in Turkey). Özsoy's findings are somewhat different. In his most extensive runs, he finds investment, labor, and human capital statistically insignificant but the non-military public sector, the military public sector, and the civilian sector *per se* all make statistically significant positive contributions to economic growth. When the equation is changed to estimate spill-over effects, however, all variables turn out to be statistically insignificant except for the spill-over effect from the nonmilitary public sector to the civilian sector (whose effect is estimated as positive).<sup>9</sup>

In an interesting exercise, earlier performed by Ward, Davis, and Lofdahl (1995), Sezgin computes rolling estimates over 24-year sub-periods (from 1950-1973 through 1970-1993) and finds that the overall and the spill-over effects of the military sector in Turkey are large and statistically significant in the early time periods, but gradually decline and become statistically insignificant in the later time periods. This suggests that if Turkey did, at one time, receive positive economic spin-off effects from its military sector, these effects have vanished over time.

But suppose we take Sezgin's and Özsoy's interpretation – that the Turkish economy benefitted from its military expenditure – at face value.<sup>10</sup> Then the next step should be to ask, exactly what is it about the military sector that makes it contribute positively to economic growth? What are the channels by which public spending on the military stimulates GDP? And are we to expect a negative impact on economic growth if Turkey's military expenditures were to fall? Large-scale macroeconomic models, reviewed next, suggest otherwise.

#### **Question 4: a peace dividend from reduced military expenditure in Greece and in Turkey?**

There are two large-scale macroeconometric studies available, one each on Greece and Turkey, that simulate the impact of reductions in military expenditure on a variety of economic performance variables. Both were published in 1996, both are technically excellent studies, and both have not been cited much at all in the post-1996 literature. They both find that reductions in military expenditure would benefit both countries. The benefit is very small for Greece but rather substantial for Turkey if the most promising simulated scenarios were actually implemented. Both models are satisfying in that they include supply and demand equations, fiscal and monetary policy equations, and so on.

Balfoussias and Stavrinou (1996) employ a large-scale macroeconometric model consisting of some 330 equations (90 stochastic and 240 identities) to simulate the effects of possible reductions in Greek military expenditure. The scenarios involve an annual five percentage point reduction in Greek nominal military expenditure for 1995 to 2000, to be taken from procurement, leaving military personnel outlays unaffected. The savings are applied as follows: (a) to public consumption; (b) to public investment; and (c) to tax reduction. The military data are disaggregated into personnel (wages, etc.) and everything else (mostly imported procurement items). Without exception, relative to the baseline scenario without changes in military spending, the disarmament and reallocation scenarios result in higher GDP growth, higher private consumption, lower unemployment, and an improved balance of payments (i.e., more exports and fewer imports). Private investment increases beyond the reference projection in two of the three scenarios and drops slightly below the growth of the baseline scenario in the public consumption scenario. However, because Greece is already a relatively open economy, the authors argue that the simulated effects of disarmament are "relatively minor" (p. 212), as indeed they are. For example, GDP in 2000 is projected to grow by 3.8 percent in the baseline scenario. In the tax reduction scenario, GDP would grow by an additional one percent of 3.8 percent, i.e., by 3.838 percent. This is one of the more satisfying models I have encountered in the literature under review. The simulations permit one to put a price or opportunity cost on alternatives foregone.

A similar disarmament modeling effort was undertaken for Turkey (Özmucur, 1996). His model indicates that any peace dividend "may prove substantial if resources can be directed towards government non-military investment" (p. 215), a conclusion in rather sharp contrast with Sezgin and Özsoy.<sup>11</sup> In an interesting twist, and before studying the impact of disarmament on Turkish economic performance variables, Özmucur finds substantial negative, and statistically significant, correlation coefficients

between the budgetary shares of Turkish military expenditure and those on expenditure on health and education for data from 1924-1994. Over the entire time period, military expenditure exceeded that of health and education combined. Regarding the simulation, the model used consists of 27 stochastic equations and 30 identities and is estimated over quarterly data for 28 observations (1987:I to 1993:IV). Government spending is split into non-military and military expenditures, as are government investment expenditure and merchandise imports.

The model contains aggregate supply and demand blocks, and blocks for the labor market, balance of payments, prices, the public, and the financial sector. The simulations are run for 1995:I to 2004:IV to obtain a baseline solution. Then military expenditure as a share of GDP is reduced by one percentage point and four scenarios are simulated. In the first scenario, funds are taken from military imports (minus 20 percent), and military operating (minus 31 percent) and investment (minus 46 percent) expenditure. The funds are applied to deficit reduction. In the second scenario, military imports are reduced by half (50 percent), military operating spending by 15 percent, and military investment by 46.5 percent and applied mostly to improve the balance of payments. The third scenario applies reductions as in scenario 1 but uses the funds for tax reductions. Finally, the fourth scenario also reduces military outlays as in scenarios 1 and 3 and applies the saved funds to non-military public investment. Scenario 4 turns out to be most desirable in terms of the model criteria: GDP, inflation, unemployment, balance of payments, real wages, and labor productivity. GDP for instance increases by an additional 2.7 percentage points relative to the baseline scenario, involving a substantial gain in living standards. What is likeable about this model is that it considers target variables other than mere GDP and that, although fundamentally a Keynesian demand model, it includes a four-sector supply side.

In sum, both of the large-scale macroeconomic models, but especially that for Turkey, suggest that the countries' economies would benefit from reductions in military expenditure.

### **The political economy of military expenditure and prospects for conflict resolution**

Let us summarize the findings so far: (a) if there has been an arms race between Greece and Turkey, it ended in the mid- to late-1980s, probably because of economic exhaustion in Greece; (b) we really do not know much at all about what drives demand for military expenditure in Greece or in Turkey, certainly not for the 1990s and the current millennium; (c) the economic impact of military expenditure in Greece is

probably slightly negative and, for Turkey, may have been positive at one time but is now neutral or negative; (d) reductions in military expenditure would benefit Greece slightly and would benefit Turkey in a major way.

Now put these findings into the political context of Greece, Turkey, and their interaction. I make three points: (a) Greece is not as weak as it believes; (b) Turkey is not as strong as it believes; and (c) to capture the benefits from reduced military expenditure, it is time to return to a period of friendship and cooperation. First, from Greece's point of view Turkey has the upper hand militarily, and the onus is on the quality of Greek foreign policy making. Turkey is large and mighty and very much a secular, and Islamic NATO front line state. Turkish and/or Muslim minorities dot the Balkans much more so than Balkan minorities speckle Turkey. But Greece is economically more advanced than Turkey; it does control most of the Aegean; there are sizeable Greek minorities in the Balkans which affords Greece opportunities to explore Balkan cooperation; Greece is a member of the EU and, even after admitting Turkey to EU membership *candidacy*, therefore controls actual *accession* of EU-aspirants to the EU (e.g., Bulgaria and other southeast and east-central European nations and, of course, Turkey itself); and Greece is a member of the EU foreign policy and defense club that might replace, or certainly augment, NATO's increasingly shaky defense guarantee.<sup>12</sup> In a word, Greece's hand of cards is not empty if it would but lose its "introverted security orientation" (Constas, 1995, p. 73), fear of encirclement (Albania, Macedonia, Turkey, Turkey-linked Bulgaria), and settle down toward sustained negotiation with the objective of settlement.

Second, Turkey's hand is not as strong as it may appear to myopic Greece. The nations surrounding Turkey are a restive lot that could quickly strain Turkey's capabilities. Resolution of differences between Israel and Syria would free the latter to turn unwelcome attention to Turkey, for instance over water rights. Resolution of western differences with Iran and Iraq would free them to turn their attention to Turkey and to dispute its current regional power status. Indeed, Turkey's US support might wane if US *rapprochement* with Iran and Iraq were achieved. Although there are substantial differences among the Kurdish populations of Iran, Iraq, and Turkey, if other problems in the region cease, the question of Kurdish rights would assume even more prominence in the international arena than it already does and would place increased pressures on Turkey's foreign policy with regard to a domestic policy issue. In addition, Turkey's internal politics is already sufficiently loaded with explosive issues, ranging from economic policy, to the Kurdish question, to the role of Islam in a secular society, to the proper role and balance among politics, religion, and the military. While Turkey is strong militarily, its external security situation points to

potentially dramatic problems, and internally Turkey is a comparatively fragile country. In a word, Turkey is not as strong as it seems and military avenues do not make it stronger. Its weaknesses require non-military approaches.

Third, consider the alternatives: if Turkey were to successfully face and address all these problems and were to become a regional superpower (see, e.g., Conostas, 1995, p. 85), it would be too late for Greece to settle for much. But if Greece were to tie up the Balkans within an EU context and Turkey were to become embroiled in southwest or central Asian conflicts, then Turkey would likely hold the losing hand. Clearly, both Greece's and Turkey's security environment is volatile and fleeting enough to encourage both to settle their differences and jointly become stronger. Therefore, in contrast to those focusing on costly maintenance of the current strategic balance between the two countries (e.g., Turan and Barlas, 1999), I would like to point to the benefits to be had from cooperation.

What would Greece gain? As we saw, Greece would probably gain little from reduced military expenditure. But it would likely gain much from increased trade and cultural relations with Turkey and possibly much from trade through Turkey to Central Asia as well. Greece would also gain stature and importance within the EU and serve as the natural EU anchor in southeastern Europe. Indeed, Greece and Turkey could play the economic and political role in the Black Sea area – although for different reasons and with a different constellation of parameters – that France and Germany played for the EU. That would be an immense gain. Greece would also gain domestic advantages where much time and effort is taken up with issues concerning Cyprus and Turkey, time and effort that could more fruitfully be spent on other issues of interest and benefit to the people of Greece. This of course requires that the Greek-Turkish conflict first be settled within Greece! To do that, it would certainly help to improve the image of Turkey in Greece, for instance by a much increased pace of business, government, legislative, judicial, entertainment, sports, vacation, and of course academic exchanges from the primary to the university levels.

Moreover, of the five primary areas of dispute between Greece and Turkey – (a) over the extent of territorial waters in the Aegean; (b) over the extent of territorial airspace; (c) over continental shelf rights; (d) over Greek militarization of certain Aegean islands; and (e) over Cyprus – it appears to me that Greece can make substantial, credible negotiation offers on the first four without jeopardizing its security and self-image. To become effective, these would need to be tied to reciprocal action by Turkey. It would then be up to Turkey to refuse and would involve no loss to Greece's security *status quo* if Turkey accepted. Again, for Greece the biggest battle to be fought probably lies in resolving vested interests within Greece, not between the

two countries.

What would Turkey gain? In contrast to Greece, Turkey's potential gains are not so much prospects for the future as prospects for the present. As we saw, the economic gains from reduced military expenditure would be substantial. Moreover, the archaic military draft that currently condemns many highly educated Turks to more than a year of professional inactivity is extremely costly and harmful to the country and would result in an immediate gain for Turkey's economy if military expenditure and military service were reduced.

Another gain would come from removing the Greek-Turkish conflict from the domestic agenda. This would reduce internal conflicts in Turkey and permit the country to focus on its many other internal problems. As is the case for Greece, the Greek-Turkish conflict is in large part an internal Turkish conflict of vested interests, some not without a certain claim to legitimacy. For example, without an external "enemy" the justification for the large Turkish army would diminish. But Turkey "needs" a large army for internal, "nation-building" purposes directed against the fear of an Islamist "take-over." Since it is obviously harder to convince people of the latter than the former – many ordinary and educated Turks already are skeptical about the need for large-scale Turkish armed forces – the picture of Greece-as-enemy is convenient even if damaging to Turkey's own development.

As the example indicates, the internal situation in Turkey is multi-layered and complex. Greece can help by removing causes that allow Turkish interests to continually portray Greece as the enemy. Greek foreign policy has not always been sufficiently astute on this point. Indeed, the simple, speedy, and humane assistance that the people of Greece offered in the wake of the Turkish earthquake disaster of August 1999 illustrates how easily and effectively the Greece-as-enemy picture can be undermined.

Perhaps it will take a pair of statesmen like Venizelos and Atatürk to move Greece and Turkey back to the mutual friendship and cooperation that they enjoyed from the early 1920s to the early 1950s. Meanwhile, as the above examples make clear, on a practical level relatively small steps can accumulate into a larger whole. To help understand and resolve the Greek-Turkish conflict, we will do well to study the internal dynamics in each country and to study practical, feasible ways in which Turkey can change its image in Greece, and vice versa.

## Notes

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The present article draws heavily on Brauer (2001a), an encyclopedic background study of virtually all literature ever published (as of December 1999) on the economics of military affairs in Greece and Turkey, and on Brauer (2001b) which summarizes that literature and focuses more narrowly on issues in economic and econometric theory. In contrast, the present article summarizes the literature for an audience of political scientists and focuses on issues of political economy and conflict resolution.

1. Majeski (1985), Georgiou (1990), Stavrinou (1992), Georgiou, Kapopoulos, Lazaretou (1996), Kollias and Makrydakis (1997b), and Dunne, Nikolaidou, and Smith (1999). There is an earlier contribution, Majeski and Jones (1981), but its results are included in Majeski (1985).

2. The figure in Kollias and Makrydakis (1997b, p. 366) is in log terms and the figure in Dunne, Nikolaidou, Smith (1999, p. 7) is in level terms. Since these can be directly translated into each other, I am referring to substantive, rather than scaling differences in the display of the data.

3. In addition, with regard to the *share*, rather than the *level*, of military expenditure in GDP, Dunne, Nikolaidou, and Smith insert a revealing footnote according to which Turkey's shares as reported in the 1998 SIPRI yearbook are much smaller than those reported in previous yearbooks and this is "not due to a change in the levels of military expenditure but to revisions in GDP series" (p. 7, fn. 2).

4. On Turkey: Chletsos and Kollias (1995b); Kollias (1995c); Kollias and Makrydakis (1997a); Dunne, Nikolaidou, and Vougas (1998). On Greece: Kollias (1993); Kapopoulos and Lazaretou (1993); Refenes, Kollias, and Zaprani (1995); Kollias (1995a); Kollias (1995c); Kollias (1996); Avramides (1997); Dunne,

Nikolaidou, and Vougas (1998); and Kollias and Makrydakis (2000). A tenth paper on Greece (Antonakis and Karavidas, 1990) is published in Italian and not discussed here since my knowledge of Italian is limited. As best as I can judge, the paper finds that the Greek demand for military spending between 1958-1986 is primarily determined by a 1974 Cyprus dummy and lagged Greek military spending (t-1).

5. The table misprints either the estimate of the coefficient or its associated t-statistic for the crucial variable of concern. The change in the share of Turkish military expenditure in GDP carries a negative sign (i.e., the higher this change, the lower the corresponding change in the share of Greek military expenditure in GDP which is counter-intuitive), but the t-statistic is reported with a positive sign. Since the estimate and the t-statistic must possess the same sign, there must be a misprint in the published results.

6. On Turkey: Sezgin (1997); Sezgin (1998); Sezgin (1999); and Özsoy (2000). On Greece: Kollias (1994); Antonakis (1995); Kollias (1995b); Antonakis (1996); Chletsos and Kollias (1995a); Balfoussias and Stavrinou (1996); Antonakis (1997a); Antonakis (1997b); Dunne and Nikolaidou (1999); and Sezgin (2000a). “Economic impact” is understood in the literature as the impact of military spending on economic growth. There is one paper that finds that Greek military expenditure from 1960-1992 appear to have positively influenced employment levels in Greece (Chletsos and Kollias, 1997, p. 446).

7. Actually, there is a misprint in this paper as well (p. 17 refers to  $dG/dM$ ) but from the discussion it is reasonably certain that the effect of  $ME/GDP$  on the inflation-adjusted GDP growth rate is meant (i.e.,  $dY/dM$ ).

8. In some equations, investment is positive and significant but I tend to look at authors’ “last run,” usually their own most considered or favored model.

9. But unlike Sezgin, Özsoy computes a positive factor-productivity differential for the military sector, meaning that it is more productive than the nonmilitary public sector.

10. A new paper by Sezgin (2000b) presents much stronger results in favor of the thesis that military expenditure in Turkey contributed positively to its economic growth. In this paper investment and the quantity and quality of the labor force are statistically significantly and positively related to economic growth as well. The spill-over effect from the military to the civilian sector is still negative, as is the productivity differential meaning that the civilian sector is more productive of economic growth than is the

military sector. This is an important paper that warrants further inspection by economists.

11. "... empirical evidence showed that Turkish defence spending is not detrimental for the Turkish economy; on the contrary, it helps economic growth" (Sezgin, 1997, p. 407). "Due to the positive effects of the nonmilitary and military sectors on Turkish economic growth, the results reported here suggest that the Turkish government should not make drastic resource-allocation changes between nonmilitary and military public spending" (Özsoy, 2000, p.156).

12. NATO's defense "guarantees" is often misunderstood. Indeed, it is *wrong* to understand it as a guarantee at all. Article 5 of the NATO treaty merely pledges the allies to "consult as a group ... prior to determining the necessary response ... [It] does not commit the allies to an automatic military response, or any necessary response" (Sandler and Hartley, 1999, pp. 25-26).

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