Several propositions are widely accepted as characterizing the post–Cold War era. These propositions include:

1. Economic interests, issues and instruments are increasingly important in international affairs.
2. Military issues, interests and instruments are becoming less important.
3. US national power, especially economic power, has declined relative to that of other countries.
4. This decline has been due to overemphasis on military issues, and reversal of the decline depends on focusing more on economic issues and economic policies.

Some of these propositions are more valid than others, and all of them suffer from the ambiguous terminology they employ.

This article is principally concerned with clarifying some of this terminology, suggesting various ways of measuring the terms that are used, and proposing several hypotheses about the relationships and interactions among the terms and concepts. The article also contains some observations about the shortcomings of several of these preceding propositions.

The central thesis is that economic and military instruments of power are often closely linked, rather than being independent of each other, that the relationships between them are often complex and subtle, and that these relationships vary in different contexts. To be effective, economic power and economic instruments of power sometimes complement military power and military instruments, and at other times and in other circumstances substitute for them. To clarify these complex relationships, the article begins by suggesting various indicators or
metrics for defining and measuring economic instruments of power, and
the military instruments of power. It is acknowledged in the article that
the political and diplomatic instruments of power are also of central
importance, although these are not the focus of the present discussion.

Having proposed several metrics, three hypotheses about the relations-
ships among them are formulated: first, that national power depends on
economic instruments, military instruments, and a set of other shift
variables; second, economic instruments in a given period depend on
their level in the preceding period, as well as on the level of military
instruments and a set of other influential economic factors; and third,
the level of military instruments in a given period depends upon their
level in the preceding period, the current level of economic instruments,
and a set of other conditioning political, as well as economic and
military, variables.

Finally, several examples are cited of how economic instruments can
be used, in conjunction with or as a substitute for military instruments,
to influence the behavior of various actors in the international arena.
Economic Instruments, Military Instruments, and National Power

Charles Wolf, Jr.

Among the extraordinary changes that have occurred in the international arena since the late 1980s, three sets of events have provided particular support for several now widely accepted propositions pertaining to economic and military policies, national interests, and national power. The three events are the advent of perestroika in 1986 and its consequences, including the dissolution of the Soviet Union; the fall of the wall in 1989 and its consequences in central and Eastern Europe; and Japan's dramatic economic performance, as well as the associated occurrence of large and sustained current account deficits by the United States and surpluses by Japan.

The widely accepted propositions are:

- Economic interests, issues, and instruments are becoming increasingly important and influential in international affairs.
- Military issues, interests, and instruments are becoming less important and influential.
- US national power—at least, the salient (economic) dimension of that power—has declined and/or is declining relative to that of other countries.
- This decline is due to overemphasis on military issues and instruments.
- "Reversal," "renewal," and "revitalizing" of US power and influence depend on redressing this misplaced emphasis by focusing more on economic issues and economic policy instruments.
Among the best illustrations of these views are the following:

From Samuel Huntington:

In this new environment . . . military capabilities are likely to be less important than they have been in the past. Economic measures will be central . . .; diplomacy and economics will be crucial . . . the promotion of US strategic interests will involve not only foreign and defense policy but also domestic policy on the budget, taxes, subsidies, industrial policy, science and technology, child care, education, and other topics.

The one area of US weakness is economics and the challenge in that arena comes from Japan. In a world where economic power and economic issues are increasingly important, that challenge is a real one.

From Paul Kennedy:

. . . because a top-heavy military establishment may slow down the rate of economic growth and lead to a decline in the nations share of world manufacturing output, and therefore wealth, and therefore power, the whole issue becomes of the [sic] balancing the short-term security afforded by large defense forces against the longer-term security of rising production and income.

. . . the United States now runs the risk, so familiar to historians of the rise and fall of previous Great Powers, of what might roughly be called "imperial overstretch": that is to say, decision-makers in Washington must face the awkward and enduring fact that the sum total of the United States’ global interests and obligations is nowadays far larger than the country’s power to defend them all simultaneously.

From John Mueller:

Throughout the developed world countries are coming to the conclusion that the most desirable thing to have, after such basic concerns as life and security are taken care of, is prosperity. That is, just about everybody would rather be rich than just about anything else.

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4 John Mueller, *Retreat from Doomsday: The Obsolescence of Major War* (New
From my RAND colleague, David Ochmanek:

As the Soviet threat atrophies, there will be less willingness on both sides of the Pacific to compromise on what used to be seen as second-tier issues. We who work on national security issues have long consigned trade and burden-sharing to the second tier, focusing on deterrence of the Soviet Union and arms control in the first tier. Now these are becoming secondary or tertiary, and trade, burden-sharing, and cooperation on the environment are the first-tier issues.  

I agree with many of these propositions and citations. They contain much truth, but what they contain is not the whole truth.

There are three reasons why at least some reservations about their validity is warranted. First, the precise meaning of some of the terms is not clear and hence some of the propositions are ambiguous. Second, the propositions seem too simple to deal adequately with the complex phenomena they purport to describe and explain. Third, errors and miscues have so often in recent years followed in the wake of commonly accepted assertions and forecasts that it is probably worthwhile to be skeptical about the validity of this new area of apparent consensus.

In this paper, I will begin to address these matters in several ways: trying to clarify some of the ambiguous terminology, suggesting various ways of measuring—or at least thinking about measuring—the terms that are used, and proposing several simple and explicit hypotheses about the relationships and interactions among the terms and concepts.

Central Theme, Terminology, Measurement

My central thesis is that economic and military instruments of power are intimately linked, rather than each being independent of the other, or one being clearly and invariably dominant over the other; that the relationships between them are often complex and subtle; and that these relationships vary in different post–Cold War contexts. Economic power, to be effective, sometimes complements (reinforces, or even


requires) military power or may be complemented by military power, and at other times and in other circumstances, can substitute for it. The converse proposition is also valid: sometimes military power can substitute for economic power, and at other times and in other circumstances, military power may complement (reinforce, or require) economic power. (Nils Bohr once observed that the opposite of a shallow truth is false, while the opposite of a deep truth can also be true.) Because of these interactive relationships, it may be unwise to consign military power to abrupt neglect or precipitous decline.

I will first define these terms, and then explore the hypothesized relationships among them.

Several plausible indicators or metrics can be used, at a very aggregative level, to define and size what I mean by “economic instruments” of power: GNP, population (and hence labor supply and per capita GNP), and a country’s current account surplus. GNP and per capita GNP are typically used by the previously cited authors in their references to economic power, or to changes among countries in their relative economic power. I have added the current account surplus as an economic instrument of power on the arguable premise that it represents a capital resource that, in principle at least, can be guided or shunted, by the use of one policy device or another, toward or away from a particular target area that may be the object of a nation’s power.

At a more disaggregative level, the economic instruments of power can be defined in terms of components of the GNP that are believed to be particularly significant—for example, advanced and advancing technology sectors such as telecommunications, microelectronics, semiconductors, fiber optics, engineering and bioengineering industries—whose special significance resides in the economy-wide, growth-promoting effects they are thought to generate, in the monopoly market power (and supernormal profits) they may entail, or in their putative connection to present or future military capabilities. Similarly, specific components of the population and manpower pool may be considered of greater significance as economic instruments of power than the population as a whole: for example, certain types of skilled labor; managers; design, production, and marketing engineers; and of course economists and policy analysts. One can also think of more disaggregative components of a country’s international accounts as
providing another type of economic power: for example, the size of its market to which foreign access may be permitted or denied. This can be roughly proxied by its level of imports. (Note that a country’s level of imports are—potentially, at least—a source of economic power, not just its exports.) Another component is the volume of exports of goods and services that a country can direct toward or exclude from foreign areas.

Economic instruments of national power provide a means of influencing behavior by conferring rewards or imposing penalties. For example, a country’s capacity to provide economic assistance or to apply economic sanctions by withholding or denying trade or assistance depends on what I have defined as its economic instruments.

Indicators of a country’s “military instruments” of power are, at an aggregative level, its military spending, the size and quality of its military forces (active and reserve), and the magnitude of its military capital stock. At a more disaggregative level, the military instruments entail specific types of forces and capabilities: for example, air and sea lift; projection forces; accurate delivery systems; command, control, and intelligence capabilities; and so on.

Military instruments of national power provide a means of influencing behavior in the international arena by deterrence or compellence; that is, by using force, or a credible threat to use it, to dissuade other countries from using force; or by using force to coerce, preempt, or repel their attempts to use it.

Before being criticized for neglecting the important role of political and diplomatic instruments of power, I will simply acknowledge that I take their importance for granted. I do not mean to imply that the political and diplomatic instruments are less important than the ones I have referred to, nor that they do not interact with the economic and military instruments in complex and substitutive, as well as potentially reinforcing, ways. But I want to focus here more directly on the economic and military instruments of power because much of the recent discussion about the new and changing international order, and much of the previously cited literature, have this focus. In the following discussion, I will abstract from the acknowledged effects of political and
diplomatic instruments to concentrate on the economic and military ones. This should not be construed as discounting or diminishing the importance of politics and diplomacy, but as a departure from realism in the interests of convenience.

To continue this glossary, I define power as a generalized and more or less "convertible" asset capable, within limits, of protecting and advancing national interests. I will not have much to say about national interests. To the extent that references to them occur in what I have already said, I construe national interests as very broad goals and principles—for example, "life, liberty, and the pursuit of happiness" or, alternatively, military security, freedom, and prosperity. Defining national interests in more operationally useful terms depends on particular policy contexts and circumstances that I will not be addressing here, although I will make some brief observations later about the relation between national or public interests, and private ones.

In defining power as an asset that can be used to protect and advance national interests, I am avoiding the question of willingness or motivation to use it. Thus, while the magnitude or "value" of US power may be large (and may actually have grown in relative terms), our willingness to use it may have receded as a result of the end of the Cold War and the dissolution of the Soviet Union, as well as our increasing disposition to attend to serious problems at home rather than those abroad.

I have not been able to think of a suitable metric for national "power" that is independent of the contributory instruments. If one thinks of power as a convertible asset capable of protecting and advancing national interests by influencing behavior, specific examples of the exercise of that power can be cited, as well as instances in which there were serious limitations on its exercise and effectiveness. For example, the United States demonstrated its power in organizing the Desert Shield / Desert Storm coalition, and applying that power to bring about

6 In a formal sense, the political and diplomatic instruments can be thought of as other variables, or "shift" variables, that may affect the shape and impact of the economic and military instruments.

7 Alternatively, motivation and volition might be construed as encompassed by the political instruments of power that I mentioned earlier.
a stipulated goal: ejection of Iraq from Kuwait. US power—economic as well as military—has also been largely—if arguably—responsible for victory in the Cold War and the disestablishment of communism in the former Soviet Union. Recent efforts to bring about peace and stability in the Middle East by bringing Arabs and Israelis to the negotiating table have exemplified the extent of US power as well as its limitations. Other illustrations of the limitations on US power abound: for example, US removal from naval and air bases in the Philippines; the inordinate delays and difficulty encountered in trying to bring about a phased removal of export subsidies in agricultural trade and eventual completion of the Uruguay Round of GATT; inability to bring about successful outcomes in Bosnia, Somalia, Haiti, etc.; our limited ability to control international sales of conventional weapons or to stop proliferation of nuclear, chemical, and biological weapons technology, and so on.

Before too much is made of these limitations on US power, it is worth recalling that even during much of the 1960s and 1970s when the United States was supposedly hegemonic, our ability to influence external events along lines we desired was no less, and perhaps even more, limited. Recall, for example, that a Marxist-Leninist regime became firmly entrenched in Cuba at the start of the 1960s; that nuclear weapons were acquired by France (1960), China (1964), and India (1974), despite strong US opposition; that France exited from NATO in 1967; and that South Vietnam was overrun by Communist North Vietnam in 1975. If one compares the period of our supposed hegemonic past with the period of supposed US decline in the 1980s and early 1990s (in which the Cold War has been won, the Soviet military threat has eroded, communism has been crumbling, and democratization and marketization are advancing, if sometimes falteringly), it can be argued that our effective “power” has been greater in the recent period of supposed decline than in the prior one of putative hegemony!

**Relationships and Interactions**

Having more or less clearly defined the terms, I hypothesize three sets of relationships among them:

- First, in a given context, the national power of the United States depends on (is a function of) its economic instruments, military
instruments, and a set of other shift variables, including in particular the political and diplomatic ones.\footnote{8}

- Second, economic instruments depend on the level of economic instruments existing in the preceding period; the level of military instruments in the current period; and a set of other influencing factors or variables, such as the GNP, its division between investment and consumption, its growth rate, or particularly significant sectors or components of the GNP.\footnote{9}

- The third relationship stipulates that the level of military instruments depends on the level of military instruments in the preceding period, the current level of economic instruments, and a set of other influencing factors or variables, such as alliance relationships, political and social cohesion, and so on.\footnote{10}

The second and third relationships reflect comments I made earlier: The effectiveness of economic instruments depends in part on the military instruments, and vice versa.

I will not conjecture about the possible functional forms of these relationships, whether they are additive or multiplicative, whether and when they are subject to increasing or decreasing returns, and so on. In general, the national power specified in the first relationship will be greater when the economic instruments or the military instruments are larger. In some circumstances, one of these may substitute for the other. In other circumstances, more of one instrument will have little or no effect on "power" without an increment of the other (complementarity). Examples of both situations are offered later.

\footnote{8} In symbolic terms, this can be expressed as
\[ P_t^q = P(E_t, M_t, X_t) \]
where \( P \) denotes power, \( E \) is a vector of economic instruments, as defined above, \( M \) is a vector of military instruments, as defined above, and \( X \) is a vector of other variables, including political-diplomatic ones. The index \( q \) denotes the state, context, or initial conditions, and \( t \) refers to a specified time period.

\footnote{9} This relationship can be expressed as:
\[ E_t = E(E_{t-1}, M_t, Y_t) \]
where \( Y \) is a vector of other relevant variables, and the other terms are as defined in the preceding footnote.

\footnote{10} This can be stated as:
\[ M_t = M(M_{t-1}, E_t, Z_t) \]
where \( Z_t \) is a vector of other relevant variables.
The relationship that defines the economic instruments (equation 2) is also complex. To the extent that the military instruments take resources away from the economic instruments, the relation between them is negative and conflicting. To the extent that military instruments (for example, military technology or foreign military sales) may generate spillovers that benefit the economy at large or particular sectors within it, the relationship between them is positive and synergistic. A similar complexity applies to the functional relationship between the military instruments and the economic instruments in the third hypothesis. Resources devoted to economic instruments reduce those available for military instruments, but the economic instruments may also raise the effectiveness of resources (e.g., technology) devoted to the military instruments.¹¹

4. Examples and Illustrations

The complex and varying relationships between economic and military instruments of national power can be illustrated by examples from the recent past, as well as by their application to potential and current national security issues.

¹¹ These relationships can be summarized in the following diagram:

The curves P₁, P₂ and P₃ are “isopower” curves showing differing combinations of the economic and military instruments, E and M, respectively, that can be combined to achieve the same level of national power, with P₃ > P₂ > P₁. The shift variables X, Y, Z can move the isopower curves up or down as indicated by the two-pronged arrow. Strict complementarity between the economic and military instruments would be illustrated by L-shaped isopower curves. In this case, adding more of either instrument would be ineffectual in advancing national power, in the absence of an increment in the other instrument.
One aspect of these relationships is illustrated by a security problem that will be increasingly serious in the new and not necessarily orderly world environment: namely, the problem of establishing and enforcing controls on arms shipments to various regions, especially arms trade involving weapons of mass destruction. To begin, one can use standard force-on-force analysis to establish one or more stable military balances at different levels of regional military forces. This problem is not unfamiliar, although it has certain complicating characteristics in some regions. For example, in the Middle East stability must be sufficiently robust to meet the test of different and possibly changing combinations of potential adversaries, rather than a single and static adversarial alignment. However, let us assume that such more or less stable force balances can be calculated, and that they would be reassuring rather than threatening to all members of the region.

The question then arises, how might these balances be enforced by controlling weapons imports into the countries of the region, and similarly, by controlling exports from the weapons suppliers? If arms import "quotas" for different categories of weapons can be established for each country of the region (derived from the prior analysis of stable balances), then perhaps it may be possible to enforce those quotas by using, for example, the extension or threatened withholding of economic assistance as inducements for compliance by the importing countries, or by using technical assistance to provide improved defense budgeting processes for the countries of the region, to increase transparency and accountability, to facilitate collective monitoring of military transactions, and thereby contribute to compliance. In this case, a military instrument—arms control as a contributor to stable deterrence—might be strengthened (complemented) by the use of economic instruments.

Inducing compliance by the sellers—both the G-5 principal ones and the second-tier ones (e.g., Brazil, Argentina, Korea, Taiwan)—is as least as difficult as inducing compliance by the buyers. Consistent with establishing quotas for the types and quantities of arms imports by regional buyers, export quotas might be agreed upon by the arms sellers, analogous to producer agreements that have been negotiated and maintained for many years (with varying success) in connection with internationally traded commodities such as tin and coffee. Enforcement of regional arms export quotas might be accomplished by invoking another
economic instrument: namely, the threat of excluding firms that engage in quota-breaking sales from access to the US market. This would be another instance of using economic instruments to complement military ones.

Economic instruments will also affect the direct employment of force in the post–Cold War era. Effective use of force is likely to be increasingly dependent upon collaborative participation among several countries acting in concert. Whether this collaboration occurs through the United Nations or through ad hoc coalitions—Desert Shield/Storm reflected both elements—the ability to form such coalitions will increasingly be influenced by the use of economic instruments to provide rewards or to impose or threaten economic penalties.

In the specific case of Desert Shield and Desert Storm, economic instruments of power were vital adjuncts of the military instruments that were employed. For example, curtailment of Iraq’s access to oil revenues and to imports of equipment and spare parts probably contributed to weakening its capabilities for resistance. And economic instruments and incentives provided important elements in bonding the extraordinary US-led, twenty-nine-nation coalition engaged in Desert Shield and Desert Storm. Forgiving Egypt’s $7 billion military debt to the United States, as well as extending a promise of more direct economic support in the future, was an important inducement to enlist and sustain Egypt’s crucial role in the coalition. Assurance to Turkey that it would receive offsets to the economic sacrifices it made in embargoing oil deliveries from Iraq played a similarly crucial role in facilitating its participation in the coalition.

Although the Soviet Union’s direct participation in the Gulf coalition was limited—confined to a couple of naval vessels in the Gulf to help enforce the embargo against Iraq—its political role was crucial in supporting the twelve Security Council resolutions. To be sure, this role became somewhat tendentious, if not mischievous, in the final stages of the war. Nevertheless, the generally supportive stance of the then-Union government was valuable, and doubtless was influenced by Soviet interest in avoiding anything that might further impair its access to Western trade, technology, and finance.

In a similar vein, other members of the diverse coalition—notably Syria, Pakistan, Czechoslovakia, and Poland—were probably influenced
by considerations of economic interest and access. In these cases, economic instruments contributed to enhancing the effectiveness of military ones. In other instances, the causality has run the other way. For example, Saudi Arabia’s steadfast resistance, after the Gulf war, to OPEC pressure to reduce oil production and raise oil prices, suggests the reverse causal sequence. In this case, the US military effort to protect Saudi security against the threat from Iraq resulted in economic benefits—an enhancement of US economic instruments—as well as benefits to other oil importers.

The closeness, as well as complexity, of the linkages between economic and military instruments was also exemplified by the anomalous roles of Japan and Germany. Both countries opted to provide funds rather than forces due to real or alleged political constraints that hindered their deployment of forces abroad. To this extent, their economic instruments substituted, albeit imperfectly, for military ones. From the standpoint of the coalition as a whole, the significant Japanese and German financial commitments helped to support the coalition by providing economic benefits (or relief from costs) for several of the “front line” states whose military participation would otherwise have been more uncertain.

5. Concluding Observations

Some of the relationships between economic and military instruments can be summarized in several propositions, some of which are deducible from the preceding discussion, while others are not. Some of the propositions support and supplement those stated at the beginning of this paper, while others do not.

1. The international environment of the post–Cold War era will be characterized by uncertainty, unpredictability, and instability. Many, and probably most, of the instabilities will warrant a response from the United States of neglect—benign or otherwise—either on grounds of limitations on our power to bring about predictable improvement and relief, or on ground of limited national interests in trying to do so. But some instabilities may warrant the application of either or both economic and military instruments, by the United States acting alone or, more likely,
acting in coalition with others. To choose when and how to respond in such circumstances will entail a capacity for resilience and flexibility in the design and deployment of economic and military instruments—both separately and in combination.

2. In an environment in which uncertainty (in the sense of incalculability rather than of probabilistic "risk") will be greater, and a higher premium will be placed on "resilience" and flexibility, the economic instruments of power may be of increased importance relative to the military instruments. (To be more precise, the respective partial derivatives of power with respect to the economic instruments will probably rise relative to those with respect to the military instruments in the functional relationships described above). The ability to confer economic advantages or impose economic penalties will be preferred over the ability to coerce, although the latter will sometimes augment the effectiveness of the former.

3. The contention that US domestic socioeconomic problems (which affect the magnitudes of the economic instruments, as defined above), are due principally to overemphasis on the military instruments is not tenable. Resources devoted to military instruments in the United States over the last several decades have varied from three or four percent to six or seven percent. The resources that would be freed by lower levels of military spending would inevitably be divided between consumption and investment, with the former probably absorbing most of the savings (or peace "dividend"). Hence, the predictable incremental effect on GNP growth would be less than half of one percent per annum. Rather than resulting from the magnitude and composition of the military instruments, the socioeconomic problems that impede economic growth and "competitiveness" depend instead on many other complex and troublesome problems and issues that are quite unrelated to the military variables: for example, tax policies, education policies and institutions, health care financing, and "governance" (for example, term limits, campaign funding, executive-congressional relations, and federal-state-local government relations).
4. As already noted, economic performance is minimally affected by whether as little as three percent of the GNP or as much as six percent of it is allocated for military instruments. To the extent that sustained economic performance is equated with what is sometimes referred to as economic “security,” its determinants are largely matters of domestic policy rather than foreign policy.

5. The earlier statement that national “power” can be thought of as a “convertible” asset that can be used to protect and advance national interests has begged the question of defining “national interests” in a meaningful way. While it is legitimate and valid to link national interests to the broad national purposes and values mentioned above, at this high level of generality “national interests” have limited influence on policy because they can usually be invoked to justify widely different policy positions. For policy-related purposes, it is perhaps more appropriate to think of the national interest or the “public interest” as constituting a weighted sum of private interests. The problem, of course, is how to determine the weights. In a democracy, the weighting of private interests depends on the political process. The fairness of that process depends on the access and opportunity that the competing private interests have to present and advocate their respective cases, as well as on the transparency of the process itself.

12 Cf. Schumpeter’s comment: “There is no scientific sense whatsoever in creating...some metaphysical entity to be called The Common Good and a not less metaphysical ‘state,’ that, sailing high in the clouds and exempt from and above human struggles and group interests, worships at the shrine of that Common Good.” J. A. Schumpeter, “The Communist Manifesto in Sociology and Economics,” *Journal of Political Economy*, June 1949, pp. 205–6.