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Unique Transaction Costs in Defense Market(s): the Explanatory Power of New Institutional Economics

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Abstract

Concerns about the US Military-Industrial complex have seemed a permanent fixture in the DoD. Initial studies outlined the uniqueness of the market, but continued utilization of classic economic approach continues with little explanatory power. This paper offers an alternative approach using transaction-costs analysis and the explanatory power of the New Institutional Economic and Public Choice School. The approach provides explanatory power in the defense markets' mix of the invisible and visible hands at work and provides a framework for assessing viable policy alternatives that could provide increased efficiency while maintaining our principles of freedom.

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Introduction

In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex.

President Dwight D. Eisenhower Farewell Address, January 17, 1961

Still much of the public discussion of weapons acquisition problems proceeds as if the terms "competition," "price," "buying," and "seller" had the meanings they do in a market system.

(Peck & Scherer, 1962)

As the United States shifted from arsenals to more and more utilization of private firms in the acquisition of weapon systems, concerns grew about the military-industrial complex. Those concerns were most famously noted by President Dwight D. Eisenhower in his farewell address in 1961. He warned, "we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex." By this point, the defense market(s), or the "military-industrial complex," had grown to become a considerable economic factor. The Korean War and Cold War (generally) had driven defense spending to over 10% of Gross Domestic Product (GDP) for most of the 1950s. With such financial concerns, interest grew in the weapons acquisition process; and in the late 1950s, Harvard Business School conducted an extensive study of the industry (Peck & Scherer, 1962). The stated purpose of the study was:

to determine the nature of the relationship between the government and weapons contractors in the acquisition of advanced weapons and to analyze the effects of these relationships on weapons performance and the speed and cost of their acquisition. The project will also recommend changes in government and business policies and practices having a direct and significant impart on relationships between government and weapons contractors.

In their conclusion, the authors note that their analytical descriptions did not:

yield a simple model in which a few functional relationships set forth how an economic process operates. Although such models have been the stock-in-trade of economists, they have their limitations. Undoubtedly such a model could be developed for the weapons acquisition process. Yet given the present state of knowledge about the process, there is little assurance that the right simplifications would be made, or that the various functions would be expressed correctly, or that the interactions of those functions would yield an accurate description of what goes on in weapons acquisitions.

To date, over 40 years later, no model or basic framework has emerged that provides an effective "description of what goes on in weapons acquisition."

Traditional neoclassical economic assessments of ineffective and inefficient weapons procurement have been published since the first analyses by Peck and Scherer, but none seem to have explanatory power. Most pick up on the seemingly justified negative assessments given the poor performance of some weapon systems in the 60's and 70's. Most have not extended Peck and Scherer's assessment that the "uncertainties and risks mark the weapons acquisition process as unique," nor their opinion that:

substantial uncertainties and risks vitiate the use of familiar economic and administrative concepts borrowed from established institutions. The notion of a market system is one



such inapplicable set of concepts. Still much of the public discussion of weapons acquisition problems proceeds as if the terms "competitions," "price," "buyer," and "seller" had the meaning they do in a market system.

Peck and Scherer outline specific issues in each area and conclude, "the concepts of a market economy are not a fruitful point of departure from formulating weapons acquisition policy." This conclusion is vital because its profundity has not been duplicated in published form since.

Unfortunately, the emphasis in the past 40 years has been on trying to get the defense market(s) to act like a viable commercial market. Jacques Gansler (1980, 1995) in his first book, The Defense Industry, noted numerous problems with the operation of the defense market. He suggested, "to attack all of these problems, the government must implement a set of coordinated policies aimed at creating a viable market economy in each sector of the defense industry. In fact, the solutions must begin with a clear recognition that each sector has unique problems requiring special corrective actions" (1980). The book outlines the unique problems with a central planning approach so numerous adjustments can be made to solve the "unique problems." His book ends with a seven-point plan with a focus on creating a "viable free market" and "integration of civilian and military business." The approach seems to try to fix the market(s) so it would fit into one of the economists' "simple models" that can be brought to equilibrium neatly on the economic professor's blackboard. Gansler and others continued to write assessments with predictions of continued failures in the defense market and the resulting poor military capabilities. He noted in 1982 that "reports [referring to four reports from 1980 on the predicted problems with the defense industry; one of these was his book], coming from a wide diversity of backgrounds, concluded that there are serious problems with the defense industry. As a result, the United States is paying over \$50 billion a year for military equipment and not getting its money's worth. Nor can the industry supplying this equipment expand rapidly enough to make a difference in the outcome of any conflict of likely duration" (Gansler, 1982). But, it was this expansion in the early 80's by the Reagan administration that provided the fundamental system that performed so well just nine years later in Desert Storm.

Post-Desert Storm, Gansler and others continued to lay out a prescription of strategies for fixing the market, noting the need for the specialized defense firms to be more commercialoriented and to build systems that have dual uses, both commercial and military. He warned that "if the Pentagon does not implement such an integration strategy soon, defense contractors will remain specialized, highly subsidized, inefficient, and ineffective at doing anything except building a few expensive weapons systems" (Gansler, 1993). In his book, Defense Conversion, Gansler noted the continued contractions of defense firms and the continued need for defense firms to be more commercial-like and less defense-specialized (Gansler, 1995). Each assessment seems to utilize neoclassic economic models which (in general) ignore the frictions—those uncertainties and risk noted by Peck and Scherer—in the market and attempt to find a way to equilibrium. Gansler's long list of prescriptions pushed for government interventions that would make the complex acquisition system more like the commercial market and, thus, more able to achieve this equilibrium. Many of these prescriptions were not implemented, however, even when he was appointed as the senior acquisition official for the Defense Department during the second term of the Clinton Administration. His attempts to encourage defense firms to expand into commercial business generally failed; the industry continues to consolidate and has narrowed its focus on government business (Driessnack, 2003). So, even when the economist was placed in charge to implement his prescriptions, they did not happen. The military and the industrial complex resisted and still continue to evolve away from the policy thrusts. The policies of the past didn't work because they have been



derived from the neoclassic models of the market. A new approach which heads the warnings from Peck and Scherer is needed.

NEW INSTITUTIONAL ECONOMIC VIEW OF THE MILITARY-INDUSTRIAL COMPLEX

So, what is the model by which the military-industrial complex should be analyzed? The researcher, in a previously published study, introduced how New Institutional Economic framework provides insight for the dynamics behind the consolidation of the defense industry and challenges the notion that the defense market(s) were inefficient (Driessnack, 2003). The approach took the transactional cost (TC) analysis of firms into the defense market(s) and provided insights into the drives behind the consolidations. The consolidations are indications of a unique and functioning market(s). In that previous text, I noted:

Williamson calls for a test for remedies and states, our "test of whether an outcome is inefficient needs to recognize the constraints imposed by TC just as much as we respect resource and technology constraints." He defines this idea[, explaining] that "an outcome for which no feasible superior alternative can be described and implemented with net gains is presumed to be efficient." The terms "feasible" and "implemented" need to be understood to be in the economic and political processes, in our case the US Constitution and the evolved political and administrative processes that influence the rules, both formal and informal, of the market. (Driessnack, 2003)

Economist emphasis on rational choice and frictionless efficient markets has limited the models to an extent that they miss the complexity of the environment they are trying to model. Douglass North states:

Integrating institutional analysis into static neoclassical theory entails modifying the existing body of theory. But devising a model of economic change required the construction of an entire theoretical framework, because no such model exists. Path dependence is the key to an analytical understanding of long-run economic change. The promise of this approach is that it extends the most constructive building blocks of neo-classical theory—both the scarcity/competition postulate and incentives as the driving force—but modifies that theory by incorporating incomplete information and subjective models of reality and the increasing returns characteristic of institutions. The result is an approach that offers the promise of connecting micro level economic activity with the macro level incentives provided by the institutional framework. The source of incremental change is the gains to be obtained by organizations and their entrepreneurs from acquiring skills, knowledge, and information that will enhance their objective. (North, 1999)

It is this preoccupation with the neoclassical static models that researchers must break away from in order to build a framework at the transaction level first before we apply the lesson from neoclassical economics. North is not the only one that outlines the critical nature of the institution in the market. The firms and their management come to play in deciding roles in the efficiency of the economy. This suggestion is outlined by Chandler in the *Visible Hand, the Managerial Revolution in American Business*. In the defense market(s), the management starts with the DoD Under Secretary of Acquisition, Technology, and Logistics (AT&L). The USD (AT&L) and other key members of the separate services (Army, Air Force, and Navy) comprise the senior management team over the military-industrial complex (the overall Defense Market(s)). Yet, this group's (and, thus, the AT&L's) policies are almost completely ignored in



the diagnoses of the industry's consolidation and the prescriptions for a remedy (Driessnack, 2003).

The use of New Institutional Economics was expanded by Driessnack and King (2004) with a case study of the F/A-22 program which demonstrated the explanatory insight from a transactional-costs (TC) analysis. The approach provided insights into the governance structure on the F/A-22 program (relative to the various defense contractors) and the continued emphasis on cost even after the prime contact competition was a decade in the past. Likewise, the researcher, in a case study on the Air Force Tanker Lease program, utilized the institutional framework along with Public Choice and Austrian economic insights (Driessnack, 2004). In its conclusion, the study notes:

the uncertainty and risks in the market that [drive] changes to these institutions and thus change the calculus of the individual players is a critical dynamic that needs to be added to our assessments of the market. We need to recognize the limits of the bureaucratic and congressional institutions and engage the driver of transaction costs to better understand how alternative mechanisms could be employed to further lessen their impact. Our assessments need to consider the "feasibility" of alternatives given a broad working of the institutions and the complex environments and realities of risks and uncertainties. (Driessnack, 2004)

It is the assessment of the institutions and the feasibility of the alternatives that provides the explanatory power.

That such explanatory power can come from New Institutional Economics and the transactional-cost analysis should not be surprising. The focus at the transaction level has proven to be very enlightening and has been recognized in the award of two Nobel Prizes: in 1990 to Ronald Coarse and 1993 to Douglas North. North, in his Nobel lecture, noted:

Neo-classical theory is simply an inappropriate tool to analyze and prescribe policies that will induce development. It is concerned with the operation of markets, not with how markets develop. How can one prescribe policies when one doesn't understand how economies develop? The very methods employed by neo-classical economists have dictated the subject matter and militated against such a development. That theory in the pristine form that gave it mathematical precision and elegance modeled a frictionless and static world. When applied to economic history and development it focused on technological development and more recently human capital investment, but ignored the incentive structure embodied in institutions that determined the extent of societal investment in those factors. In the analysis of economic performance through time it contained two erroneous assumptions: one that institutions do not matter and two that time does not matter. (North, 1999)

North was focused on the development of economies, but his methods, generally those of New Institutional Economics, are enlightening in regards to the problems outlined over 40 years ago by Peck and Scherer. North continues to explain the critical nature of understanding the institutions that drive the market(s):

Institutions form the incentive structure of a society and the political and economic institutions, in consequence, are the underlying determinant of economic performance. Time as it relates to economic and societal change is the dimension in which the learning process of human beings shapes the way institutions evolve. That is, the beliefs



that individuals, groups, and societies hold which determine choices are a consequence of learning through time—not just the span of an individual's life or of a generation of a society but the learning embodied in individuals, groups, and societies that is cumulative through time and passed on intergenerationally by the culture of a society.

This then drives us in the defense market(s) to include the evolving Public Choice field in economics which enjoyed Nobel Prize winner James Buchanan in 1986.

The integration of New Institutional Economics and Public Choice was first outlined by the researcher in 2003. That study explained that, "to further understand the story of the defense firm consolidation[,] we will need to add an additional lens from the insights of the Public Choice community" (Driessnack, 2003). The combination of the New Institutional view of the firm and the Public Choice view of the dynamics from the political communities should provide the detailed framework in which insight into the whole military-industrial complex can be found. This combination falls into the Wilsonian view that institutions do matter and affect the overall calculus of the politicians and the bureaucrats (both career civilian and military officers). Yet, the theory is an expansion of the Wilsonian view in that the institutions are analyzed at a transaction-cost level. Researchers (Coase, 1988; North, 1999; Williamson, 1975, 1985; etc.) have looked at the formation of firms as attempts to reduced transaction costs in a manner that is superior to other alternatives in the market; likewise, we need to look at how the formation of bureaucracies (such as AT&L and the Service Acquisition Executive (SAE) organizations) at various levels of the government are also attempts to reduce transaction costs in a manner that is superior to other alternatives in the political market. The question is not whether bureaucracies are efficient in comparison to the Chicago School of factionalist transactions in a price-clearing market, but whether they are reasonable accommodations of the current market environment's realistic transaction costs.

Dixit, in his book *The Making of Economic Policy, A Transaction-Cost Politics Perspective* (1996), reviews the principle agent problems in government through the view of transaction costs. He notes the information asymmetries and the impacts on incentive schemes; he also mentions the "economist's standard and more direct answer to such problems (information asymmetries) is to design an appropriate incentive scheme." Dixit comments on the studies of Wilson, Holmstrom and Milgron; these researchers have noted that incentive schemes are often found to be very low-powered; so, instead of adhering to these schemes, government agencies are subject to various constraints (Dixit, 1996). The lower-power incentives are concluded to be a product of the multitasking and multiprincipal agencies. Dixit reviews various schemes and summaries—making a distinction among:

different levels of efficiency in the outcomes. The hypothetical ideal with observable efforts and Coasean bargaining between all principles and the agent would be the first-best. Respecting the information asymmetry but allowing all principals to get together and offer a combined incentive scheme would give the second-best. If the principals cannot be so united, their Nash equilibrium is[,] in general[,] a third-best. In these formal terms, the result above says that the third-best outcome that is achieved has very low-powered incentives. (Dixit, 1996)

Dixit accepts the analysis "that government bureaucracies often have low-powered incentives and are subjected to constraints on their behaviors." Yet, he does not accept the "often claimed to be proof inefficiency of government." In view of transaction-costs analysis and understanding of various institutions, would the lack of incentives and proliferation of constraints actually "be a reasonable way for the system to cope with the transaction costs"? The



mechanisms that have been developed to cope with transaction costs in a political system are driven by the same forces that drive various mechanisms in the firm. The particular mechanisms are different, but they are driven by the various transaction costs realized around the construct of the rules of the game. The public-sector's rules are not the same faced by commercial firms; thus, a comparison of the mechanisms is of little use. The better analysis is to look at the role played by transaction costs—as was done in the analysis of firms in various industries by Chandler (1977), Williamson (1975, 1985) and North (1999). Applying the resulting mechanisms of such analysis on firms in particular sectors and to other firms in other sectors is of little use. Just as these New Institutional economists have found differing mechanisms in each industry, so will we find such differences in the Defense Market(s). It is likely not just a market, but an interconnected set of markets that start inside the Pentagon among bureaucracies to Prime contractors and their sub-vendors. I propose it will be most useful to view the DoD's AT&L bureaucracy as a large conglomerate firm with numerous operating divisions that are not and should not be operated under a common set of prescriptive rules.

The analysis done by many looks at particular prescriptions that would fix specific narrow concerns with reported poor incentives, adverse constraints or inefficient mechanisms. Dixit notes that we must consider the outcome of any alternatives on the full spectrum of decision making in the government. "If the best outcome we would like to see violates the incentive constraints, then an attempt to implement it may in fact end up producing something even worse than the current situation, unsatisfactory though that may be." When judging "the performance of a policymaking system, they should admit the legitimacy of noneconomic goals and ask if a feature of the outcome that appears prima facie inefficient is in fact a reasonable way of striking a balance between the various interest, or multiple principals, given the transaction constraints" (Dixit, 1996).

Another view is a polycentric political system which recognizes that "multiple authorities serve overlapping jurisdictions." McGinnis agrees with Dixit in that the polycentric games view "demonstrates that actions that seem irrational in one context may be perfectly understandable once analysis incorporates that actor's strategic interactions with other actors" (McGinnis, 2000). This approach might seem far off the New Institutional or Public Choice approach, but Ostrom and Ostrom point out the similarities in Coase's firm employee and Tulluck's "economic man." Coase indicated that efficiency, given the set of rules (contracts), can be enhanced, while Tulluck asserts the "economic man" distorts information and, thus, degrades efficiencies. The Ostroms point out that both Coase and Tulluck recognize the limits of the firm or bureaucratic organization. That traditional theory of public administration would not recognize the limit (McGinnis, 2000). But, we also need to look at this from the other side; can not the bureaucratic organization (if established appropriately) reduce costs as the firm does in the market? Buchanan and Tulluck discuss two type of costs: external and decision making. The costs that an individual expects to have as a result of decisions that deviate from preferences and impose costs upon individuals are external. The decision-making costs are the transactional costs, the expenditures of resources and the forgone opportunities in the decision-making process (McGinnis, 2000). These costs are affected by the rules about the rules—the constitutional framework. Expected costs would reach zero if all were required to agree, but then decisionmaking costs would greatly increase as managers attempted to reach the unanimous agreement. The calculus of the consent is when these two cost curves intersect. Different situations drive different costs and, thus, different rules. So, to determine if the military-industrial complex is efficient or not, one must understand that this production-type function is a politicalcost function which balances the external costs with the decision costs. These costs might be optimized for a particular decision, but this is too narrow of a view. The overall efficiency of any

one part of the political system must envision the impacts on an overall political cost curve—not the individual political cost curves in any one section of the political system.

Buchanan and Tullock (1962) note:

if, for those activities that have been shifted to the public section, the costs-minimization decision-making rules have not been chosen, normative statements can be made about certain changes in organization. External costs imposed on individuals through the operation of the activity may be higher than they need be, and these costs can be reduced only by a change in the decision-making rules.

This view must be understood in a broad sense of the whole system and not taken in a narrow view of one or several institutions in the government; likewise, one should realize the related costs drive each system. For the military-industrial complex, a broader assessment needs to be completed to determine if the evolving decision systems really need a change in the decision-making rules to accomplish ever-increasing efficiency and effectiveness.

Our challenge is to embrace a more complete analysis utilizing New Institutional and Public Choice tools in a manner in which we can gain explanatory capability. We will not find a perfect invisible hand, nor will we likely be able to adjust polices to obtain one for the military-industrial complex. In over 40 years, many adjustments have been made to the weapons-acquisition process to solve noted issues, but many issues outlined by Peck and Scherer still exist and have not been solved through traditional approaches. We have likely found the easy alternatives and now must work on the tougher issues. These issues require a broader view so as to improve weapons acquisition while maintaining the overall federal government principles that protect the very freedoms the military is protecting. A New Institutional and Public Choice approach to assess the current mix of the invisible and visible hands at work in the military-industrial complex will provide insight into viable alternatives that should provide an overall increase in efficiency while maintaining our freedoms.

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