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PRINCIPAL INVESTIGATOR: Stephen M. Meyer

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HANDICAPPING THE SHAKE-OUT: PREDICTING WINNERS AND LOSERS IN THE RUSSIAN DEFENSE SECTOR

Kevin P. O'Prey

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SUMMARY - INTRODUCTION

As Russia struggles to transform its economic and political system, its defense industrial sector is an obvious candidate for substantial restructuring. Although the Russian government will certainly protect some portion of its defense industries for future national security, the lion’s share of defense enterprises will find themselves without orders for their primary product -- armaments. Thus, for the first time in more than half a century most Russian defense managers and their enterprises confront the necessity of providing for their own economic survival. What factors will determine which sectors of the defense complex will be the winners in the new environment, and who will be the likely losers?

The course of restructuring in Russian defense industries is likely to occur in two distinct phases.¹ During the first phase -- the next three to five years -- most defense enterprises probably will be able to subsist without substantial restructuring by stretching limited resources obtained from state subsidies, foreign revenues, and a variety of barter deals. It will only be during the second phase -- in ten to fifteen years -- that the future structure of the Russian defense industrial base becomes settled. By this time, the winners and losers should be clearly delineated. A third group that in the long term falls between the winners and losers will be those enterprises that the state supports for national security needs. Although they will not necessarily prosper, this group will at least survive.

The two phases in defense industrial development will be characterized by fundamentally different dynamics. During the first phase there will be relatively few clear losers because of a purely political logic. Defense industrialists will be able to exploit widespread fears of the "Weimar Problem" -- high levels of unemployment leading to social and...
political instability -- in order to demand state subsidies and to eke out a subsistence over the short-term. Because they fear wide-spread unemployment, Russian federal and local governments essentially will not be able to say no to the financial demands of inefficient enterprises. By the time of the second phase, however, the economic reality of tremendous overcapacity in the defense sector and the impossibility of wide-scale conversion will have set in. An economic, not political, logic will demand that those non-priority enterprises that cannot support themselves will have to be cut off from any state support. The non-priority enterprises that survive will likely be those that adopt radical economic strategies such as 1) internal restructuring and full privatization and 2) conversion to profitable civil production with substantial domestic demand or a foreign niche.

Ironically, the radical economic strategies that will be essential for the long-term health of non-priority defense enterprises are the ones that will be most problematic and risky in the short-run. Since the key to short term survivability of defense enterprises will be successful demands on the political system, it behooves many enterprise managers not to undertake any restructuring that detracts from their main political weapon: the threat of laying off large numbers of workers. Conversely, innovative managers and entrepreneurs in the short-term are setting off into an extremely chaotic economic environment without the safety net of political support enjoyed by their more conservative colleagues. The dilemma for Russia and its defense industries, therefore, will be how to pass through the transition/short-term phase without destroying the freshly developing organizations that will prove to be the long-term winners.

The First Phase

Defense Priority Enterprises

During the next three to five years, the one group of clear winners in Russian defense industry will be those enterprises designated by the government and the Ministry of Defense as critical to Russian security. The Russian Ministry of Defense has already taken steps to identify essential defense industrial capabilities and to devote its limited resources to them. Taking advantage of its existing huge stocks of weaponry, the Ministry’s industrial strategy
will emphasize the upgrading of existing equipment rather than the procurement of new weapons systems. In the process the Ministry intends to cut off all state support for enterprises that it deems to be redundant.\textsuperscript{2} Overall a program developed by Deputy Minister of Defense Andrey Kokoshin designates 220 defense enterprises as the core industrial capability for Russian security. These enterprises will not be privatized and will continue to be supported by the state.

Designation as a critical defense enterprise ultimately may be something of a mixed blessing. On the positive side, defense orders represent a state guarantee of survival over the long-term. Yet none of these enterprises is likely to get rich: Short of a major war, it is difficult to conceive of any scenarios in which the Russian government will devote large quantities of resources to even these 'critical' defense enterprises. And, because of legal limits on the profitability of defense work, defense managers and their enterprises will always be denied the profits of their more successful private, civil industry colleagues.

\textbf{Non-Priority Enterprises}

The defense enterprises that fall outside the Russian Ministry of Defense's 'critical' list -- they outnumber priority enterprises by at least nine-to-one -- must now find economic or political means to provide for their own survival. Although virtually all of these enterprises look to foreign contacts as a panacea, they split dramatically over the need to restructure and adapt to new conditions. In the following section I will discuss the common strategy -- foreign contacts -- first and then address the competing strategies separately.

1) Foreign Contacts.

Virtually all Russian defense enterprises have been consumed with the search for foreign markets to sell off their stocks of excess output. At least during the near-term, a number of non-priority defense enterprises are showing some signs of success largely because of their immediate access to foreign markets and cooperation. Currently, a single foreign

\textsuperscript{2} For example, in the tank industry the Ministry is reducing its support for producers from five to two enterprises while in the submarine and nuclear-powered ship-building industry all future procurement and repair orders will be concentrated in the Sevmash association in Severodvinsk.
deal for hard currency can provide a Russian design bureau or production organization with several months' worth of salaries.

Hopes for a general defense industry panacea from foreign cooperation and arms sales, however, appear to be grossly exaggerated. Such hopes ignore the precipitous drop in demand for arms on the world market in recent years and the fact that hard-pressed American, French, and British arms producers overcrowd the supply side of this shrinking market. Russian defense exporters cannot even rely on the former Soviet Union's traditional markets since most of these are either a) not interested anymore (Eastern Europe), b) under an international arms embargo (Iraq), or c) cannot pay hard currency (Syria, Libya). In the technology transfer area, although firms like Lockheed and France's Aerospatiale have established joint projects with Russian partners, it appears that these could just be efforts to take advantage of the technology "yard sale at the end of history," the benefits of which will dissipate for Russians as soon as the Western firms have finished rummaging. Thus, in the longer term, except for those enterprises that find a particular niche, foreign contacts do not represent a source of long term investment for survival.

2) **Conservative Strategies: Living on Borrowed Time**.

For the majority of those defense enterprises that do not get on the Ministry of Defense list, the short-term outlook is still somewhat positive. In fact, during the first phase most defense enterprises will be able to exploit a political climate that is very favorable to them. In the process, most of these managers will adopt conservative economic strategies that avoid painful choices and seek to carry on as if nothing had changed.

The popularity of conservative economic strategies is largely a product of the legacy of the command economy. Despite a variety of free-market reforms, very few defense enterprises -- or civil enterprises, for that matter -- have been permitted to go bankrupt. As a result, most Russian enterprise managers have few incentives for efficiency and profit maximization. Instead, just as in the past, they have been very reluctant to reduce the material and staff size of their enterprises.
These problems persist in large part because of widespread fear of the "Weimar Problem." Many Russian Federal and local officials fear that large-scale unemployment will lead to social unrest and political instability like that experienced in Weimar Germany during and after the Great Depression. Because most Russian enterprises are responsible for the lion's share of social services -- apartments, medical treatment, kindergartens, etc. -- for their workers, the closing or scaling back of an enterprise would have far more serious social and political consequences than unemployment alone. As a result, despite the cancellation of their defense orders, many enterprises have continued producing on inertia, assuming that the government ultimately will bail them out.3

Defense managers have also been able to take advantage of the pluralization of the Russian political system. The increased importance of the legislative branch in Russian politics gives defense managers and workers a voice through their elected representatives. Defense managers have also joined with their civil counterparts in creating numerous political coalitions -- e.g. the League of Defense Enterprises and the Civic Union -- to promote defense industrial interests at the federal level. Thus, many non-priority enterprises that otherwise might fall into the category of losers in the short-term can adopt conservative, status quo economic strategies and successfully rely on government support for survival. In this environment the directors of the largest enterprises -- like the 40,000 worker Uralmash in Yekaterinburg -- will have the most political clout and least incentive to reduce their work force. Yet these are the enterprises that in the long-run almost certainly are the most in need of restructuring.

To the extent that conservative managers are adopting strategies for enterprise restructuring and privatization, they are in fact selecting variants that will make their enterprises more inefficient and less responsive to market forces. In the case of privatization, because the manager derives his strength from his popularity with the enterprise work force, his incentives are to privatize in ways that transfer ownership over to the management and workers' collectives, not outside share-holders. Conservative

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3 For example, although the defense order for tanks produced at an Omsk enterprise dropped from a rate of one thousand per year to only five for 1992, the director of the enterprise has steadfastly refused to change course; instead he continues to produce unwanted tanks.
restricting efforts in most cases are taking the non-priority defense enterprises in the wrong direction. Rather than breaking down bloated production associations into smaller, more manageable parts, conservative managers are creating larger consortia or holding companies. In many cases this process appears to be an effort to recreate the former ministries from below.

Finally, the current state of industrial politics and economic incentives actually discourages conversion in many enterprises. Although there is no more demand for their defense output, conversion to civilian production would be viewed as a fool-hardy strategy for many Russian defense managers. A radical shift of factory production capacities is extremely difficult and time-consuming even in times of macro-economic stability. This is even more problematic in the Russian environment where enterprises are short of resources to pay worker salaries, cannot find many worthy sources of investment, must establish new supply relationships, and must identify a market with reasonable demand. Those conservative managers who opt to convert at all are likely to engage in "supply-push" rather than "demand-pull" conversion: they will develop and produce new products based on what is convenient for them rather than what is actually demanded by consumers.

3) Radical Strategies.

A minority of defense enterprises in the short-term are adopting radical economic strategies in terms of privatization and internal restructuring. These measures range from a decentralization of decision making authority within the enterprise to the actual creation of a number of small, independent firms -- so-called "small enterprises" -- from the structure of the larger enterprises. Although the process of creating small enterprises in effect will strip defense enterprises of all their promising operations and leave what remains even more desperate than before, this probably represents the most promising avenue for the development of economic institutions from the defense sector that can survive in the long run. In particular, the small enterprise resolves the problems of ownership, manager responsibility, and incentives that are endemic in Soviet-type industries. Small enterprises generally are created and owned by entrepreneurs who are in business for economic profit.
rather than to increase the size of their organizations as an end in itself. Their small size also makes them much more flexible in adjusting to changing economic conditions. Whatever their virtue in the long run, current conditions for small enterprises are extremely difficult. Small enterprises lack the political clout of former state enterprises. Given small size they cannot credibly threaten the local and federal governments with the 'Weimar Problem' if they run into trouble. Without political resources, therefore, they are subject to the extremely unforgiving conditions of hyperinflation, high interest rates, and very rudimentary rules of the game for free market activity.

II

Phase Two – Ten to Fifteen Years

The dynamics in the Russian defense sector should change fundamentally in the next ten to fifteen years. By the middle of the second phase the winners and losers should essentially be sorted out. In the longer term economic logic ultimately will come to outweigh political considerations and fear of the Weimar Problem. The bottom line is that any Russian government will have too many competing political and economic demands to maintain state support for the large number of inefficient former defense enterprises. This message will be reinforced by pressure from international lenders as well as the inability of conservative state enterprise directors to improve their plight independently. The Federal Government should also have greater flexibility because of natural worker relocation and increased state support for social programs. Through a gradual process over a number of years, therefore, most of the non-priority defense enterprises that do not adopt radical measures will likely collapse from their own weight.

Non-priority Enterprises: Conversion, Restructuring, and Privatization

By the time ten years have passed, the economic cost of the vast overcapacity of the defense industries will force radical down-sizing and restructuring at both the sectoral and enterprise levels. No longer able to look to the government for support, defense enterprises will have to survive through a small dose of good fortune and their own economic mettle. The survivors are likely to be those enterprises that restructure themselves into smaller, more
efficient operations, privatize, and convert to profitable civilian production. The ultimate winners among these non-priority enterprises will be partly the product of structural factors: their physical and technical ability to convert to civilian production that can earn a profit. Yet structural factors are only part of the story; the actions of each defense manager and his enterprise ultimately will determine their ability to convert successfully. Enterprises that do not restructure and privatize in ways that expand ownership beyond the management and worker collectives likely will not be competitive in this environment.

Conversion.

Because of the excessive over-capacity of defense and related sectors, the potential winners among non-priority enterprises must convert to civil production that is in demand and profitable. For example, the aviation sector has too many players even when civil aircraft and export demand are taken into account. Ease of convertibility for specific enterprises seems to be the product of a variety of factors: availability of existing civil production lines, close civilian analogues to existing military production, the organizational structure of enterprises, and existence of adequate demand in the Russian domestic market. The enterprises that are best off are probably those that always produced some civil products that will continue to be in demand. For example, enterprises in the radio industries that produced television sets have experience and capabilities in a high demand civilian market.

Next in order of likely success will be those enterprises that produced dual-use output or military goods that had close civilian analogues. In the dual-use category are many of the enterprises that produced electronic and radio equipment. In the civilian analogue category are enterprises producing military transport aircraft, trucks, ships, etc. It is also likely that the Russian equivalent of US defense sub-contractors will fare better than prime contractors. Component makers probably can more easily adapt their wares to civil uses than end-product assembly facilities.

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The organizational structure of each enterprise will also have a considerable impact on its survival. First, because their staffs generally have a high degree of engineering competence, experience with innovation, and are not burdened with huge capital stock, experimental design bureaus should prove to be the organizations that are most flexible at adapting to new conditions. Following this are the organizational descendants of Scientific Production Associations (NPOs), in which the design bureau and production facility for a single product line were unified. The situation for research institutes (NIIs) is less certain because their staffs generally have more experience with basic research than hands-on engineering. Lastly, production organizations that lack integral design facilities almost certainly will have the greatest difficulty adapting to new tasks.

Just as Russian defense industries cannot look forward to many export opportunities for their military output, the same is essentially true for their converted, civil output, but for different reasons. First, many of the international markets into which they want to expand already have a number of producers and stable demand. For example, although the Russian helicopter industry is fairly well regarded, international demand is too small to support even the existing number of American and French producers. Second, in the case of current and future civil production, most Russian output is not likely to be particularly competitive technologically with established foreign competitors. Although Soviet science and design capabilities were always world-class, their out-dated production facilities consistently proved to be a bottle-neck in translating these capabilities into high quality output. This problem is evident, for example, in the aviation industry, where technological lags in jet engine production are undermining Russia's efforts to break into the very competitive market for civil airliner production.

Ultimately Russian industry will be able to develop strongly despite its limited success in foreign markets because of tremendous growth potential of the domestic market. When that economy finally stabilizes and begins to grow again it will provide large demand for industrial output, especially if the government adopts some degree of import barriers. The domestic transportation market alone, for example, will provide huge demand for civil aircraft, automobile, and truck production.
Restructuring.

Physical and technical ease of convertibility, however, is a necessary but not sufficient condition for an enterprise’s ultimate success and survival. In market conditions, most Russian enterprises are simply too large and inefficiently organized to survive. The MiG-31 producing Leninets concern in St. Petersburg, for example, has 50,000 workers in 16 plants, 2 joint-stock companies, 10 research organizations, 50 small enterprises, a bank, and an agricultural-industrial complex. This great size, of course, places excessive overhead on all the concern’s sub-organizations: profitable sections are restrained by the shared costs of inefficient operations. These enterprises must divest themselves of much of their component and sub-assembly production tasks and decentralize decision making in order to allow more flexibility in promising operations. Small enterprises and operations are much more likely to attract private investment than bloated production organizations and consortia. And, perhaps most important, virtually all enterprises must reduce chronic over-staffing and transfer many of their social tasks -- e.g. building apartments for employees -- to the state.

Privatization.

Just as restructuring will be a prerequisite for successful conversion, full privatization will be necessary for adequate restructuring. In the absence of real private ownership and its resulting incentives, the original Soviet style managers and their non-market corporate culture will persist in control of these enterprises. These managers are more likely to opt for "supply-push" rather than "demand-pull" conversion and less likely to divest themselves of inefficient operations. Therefore, even if these non-priority defense enterprises stumble onto high demand civilian production, this conversion is not likely to be profitable because of their continued huge size and overhead. With real private owners pressing for returns on their investments, these managers either would have to develop a new market-corporate culture, or they would be unseated by more entrepreneurial business people who are rapidly coming to the fore at the grass roots.

As noted above, the type of privatization option that an enterprise selects will have a critical impact on the likelihood that it will take the necessary steps for restructuring and reprofiling. "Real" or "full" privatization as used here entails an open joint-stock company
in which private individuals can freely purchase shares of ownership. Workers and management should not be permitted to own a controlling proportion of shares because they are not likely to take the painful steps of laying off redundant workers or replacing inept managers.

No single factor will provide for the success or survival of non-priority enterprises in the long run. "Winners" will be the product in part of good fortune -- the physical and technical ease of converting their plants to civil production. But enterprise behavior in restructuring and privatization will be essential for creating an organization that responds to market forces and chooses a production task that is profitable. Intangible factors will also play an important, if uncertain, role. For example, accidents of history or the luck of the draw will determine whether or not a would-be Henry Ford emerges in the management of a particular enterprise. Similarly, the corporate culture of the staff in a particular enterprise -- the willingness of the work force to sacrifice -- could be the difference between failure and success. Conversely, the big losers will be those enterprises that prove to be very difficult to convert to civil production or that avoid substantial restructuring and privatization.

Conclusion

The Russian defense sector in 2008 will probably bear little resemblance to the Soviet defense industries of old. Although the Federation government might continue to maintain a group of protected, state-run defense enterprises, overall the sector will be a small fraction of its original size. The majority of enterprises that were not protected by the government will have gone either through bankruptcy or restructuring. The winners or survivors in this group will be those that have a fortunate combination of initiative and a little good luck. They will be the ones that privatized and restructured themselves into more productive operations and found high demand civil output to which they could convert. Enterprises that opt for conservative privatization strategies and minimal internal restructuring will almost certainly be too inefficient to survive even in cases where they find high demand conversion tasks.

It is conceivable that in a number of future scenarios a Russian government would choose not to adhere to economic logic and continue with the status quo of the first phase by
continuing to keep inefficient enterprises afloat. Yet, arguably, the essential thesis of this paper would still stand, albeit the timing would be off. If the government continues to subsidize these inefficient enterprises it will only perpetuate the fundamental economic crisis. As a result, these enterprises will continue to decline, albeit slowly instead of a complete collapse. Under these conditions, over the medium- to long-term it would be impossible to classify these enterprises as anything but losers. And Russia overall will be a big loser in this formulation because putting off the inevitable will only make the transition that much more difficult when it finally occurs.