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The Challenge of Reforming European Communist Legacy ‘Logistics’

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ABSTRACT

This article posits four key challenges to address the question as to why logistics reform in Communist-legacy defense institutions has been so slow. First, what is the conceptual foundation for logistics in these countries? Second, what is the general state of national logistics capabilities in these countries? Third, why has the reform of logistics in these post-Communist legacy defense institutions been so slow and superficial? Fourth, in an attempt to understand the problem better, what do legacy defense institutions need to do themselves in order to be able to adopt modern Western logistics concepts? Conversely, what do donor nations need to understand about these legacy logistics organizations the better to enable them to understand the immense gap that divides Communist from Western logistics concepts? In addressing these questions, the author will argue two points. First, logistics reform has been impeded to date by a lack of appreciation on the part of particularly Western officials that legacy logistics concepts could not be more antithetical to their Western counterparts. Second, reform of legacy logistics organizations will not follow from attention and resources directed at tactical-level formations and importing the expeditionary logistics concept. Rather, the causation of the continued inability to adopt Western logistics concepts can be found in national-level policy, financing, laws, and regulations that continue to enable the operation of legacy concepts.

Introduction

One would be on solid footing to observe that when surveying post-Communist defense institutions in Central and Eastern Europe, one of the least reformed, and arguably most resistant to change, element is their ‘logistics’¹ organizations. By this, while other elements of these institutions have adopted some Western defense and military concepts (e.g., operation plans for those countries now in NATO), logistic support concepts, organizations, and their *logic* remain, to varying degrees, based on legacy supply, acquisition, and defense industrial concepts and assumptions. It is not too far

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¹The author recognizes that the Western concept of logistics is hardly applicable to its legacy counterpart, and this point is explained at length in the essay. However, for the purpose of clarity, the term *logistics* is used both within its Western definition as well as its legacy counterpart, except where specified.

a stretch to suggest, therefore, that these legacy practices are, in fact, not supportive of the Western approach to maneuver warfare and decentralized command. While perhaps an extreme case, the all but complete failure of Ukrainian logistics capabilities (*vide infra*) in Kyiv's response to Russia's invasion of the Crimea and support of separatists in eastern Ukraine presage the types of potential problems new NATO members and PfP Partners face when attempting to support their forces in the field. Moreover, in addition to its incompatibility with the Western approach to warfare, legacy logistics is also arguably inefficient, particularly in those countries that continue to maintain large government-owned defense industries that produce and/or support legacy weapons and systems.

To the credit of Western nations and NATO, support has been provided to these countries to reform their logistics organizations, but success has been problematic for a variety of reasons. Western assistance in this area has been largely subsumed by supporting troop contributions in Iraq and Afghanistan, but this assistance has been almost exclusively within the realm of expeditionary logistics. Such support, therefore, has had little corresponding effect on changing *national-level* legacy concepts, assumptions, and logic. Notwithstanding some efforts to conduct logistics exercises, e.g., NATO's LOGEX command post exercise (which addresses multinational logistical support of operations),² effective support to reform these legacy organizations has been hampered by intensive conceptual dissonance.

In light of the lack of progress in the area of logistics reform, this article posits four key questions. First, what is the conceptual foundation for logistics in these countries? Second, what is the current state of national logistics capabilities in these countries? The article will present representative data of a variety of armed forces in order to provide a general understanding of their underdevelopment. Third, why has reform of logistics in these post-Communist legacy defense institutions been so slow and superficial? To be sure, reform of these institutions to enable them to adopt Western defense and military concepts has been meager in essentially every other elements of these organizations. However, both in terms of organizations and operating concepts, it would appear that legacy logistics organizations possess prodigious antibodies against Western concepts. Fourth, in light of understanding the problem better, what do legacy defense institutions need to do themselves in order for them to adopt modern Western logistics concepts? And, by extension, what do NATO and donor nations need to understand about these legacy logistics organizations the better to inform them when providing advice and assistance?

As to the ongoing dissonance regarding logistics within these defense institutions, the author will argue two points. First, fundamentally, logistics reform has

²See, for example, information on Exercise LOGEX 2013 at <http://www.nspa.nato.int/en/news/news-20130214.htm>.

been impeded to date by a lack of appreciation on the part of particularly Western donor nations that legacy logistics concepts could not be more antithetical to their Western counterparts. Thus, in countries that desire reform, Western concepts have been very difficult to adopt, while in those countries that have been less keen to do so, the 'rot' has been allowed to fester that has diminished capabilities and allowed corrupt practices. Second, reform of legacy logistics organizations cannot occur solely from advice and assistance provided to tactical-level formations and importing the expeditionary logistics concept. These approaches have manifestly failed to reform these organizations in a fundamental manner. Rather, causation of the continued inability to adopt Western logistics concepts can be found in national-level policy, financing, laws, and regulations that continue to implement legacy concepts. In the end, Western advice and assistance will continue to be ill utilized until such time that these national-level elements are identified and slated for retirement and replaced by their Western counterparts as enshrined in *national*-level policy.

Conceptual basis of Communist logistics

The provenance of all Communist concepts of logistics is Soviet. *Logistics*, or perhaps better to use its more specific nomenclature — procurement, acquisition, defense industry, and supply — was completely reconceptualized by the Soviets during the 1930s in order to align the Soviet economy to support the Red Army in protecting and spreading the Revolution. Schneider argues that the Soviet concept of logistics has no counterpart in the West, as it is emblematic of the scientifically demanding and comprehensiveness of the Soviet concept of warfighting. He argues that the Soviets defined logistics as larger than the management of the support of forces but rather conceptualized it in a much broader expanse to encompass the entire nation. At the first level, Soviet planners examined comprehensively the military aspects of the nation's economy. Through rigorous analysis of the foundations of war and the economy, principles of 'Military Economic Science' were developed. The second level examined, through the use of elaborate tools and techniques from central economic planning, how all of these economic inputs (commerce, industrial production, labor, and capital) could be mobilized to support military operations. The third and final level combined these factors into a core theory of 'military economic logistics': how the armed forces can mobilize the resources of the state.³ In practical terms, these factors were integrated into what is still called in many post-Communist legacy defense institutions, 'Rear Area', which contains and manages all military support and sustainment. To aid in a Western understanding, one should think of Soviet legacy 'logistics' as wartime host-nation support (HNS) but on a hefty dose of steroids.

³J. J. Schneider, 'The Origins of Soviet Military Science', *Journal of Soviet Military Studies*, 2(4) (1989), p. 498.

More specifically, conceptually Soviet Military Economic Science turns its Western counterpart of logistics essentially on its head. The General Staff *determined* what the nation was to contribute to create and support the armed forces. In consequence, completely *absent* in the Soviet understanding is the basic principles of liberal democratic governance that the armed forces are an extension of, not apart from, society, let alone from its economy. As a further distinction, in the West it is tactical- and operational-level commanders who determine logistical requirements of their forces to meet their assigned missions. This is completely antithetical to the Soviet and indeed, most post-Communist, armed forces. Communist doctrine holds that armed forces deploy with extreme logistics limitations (10 to 12 days), and replenishment is envisaged to be pushed forward from static support depots controlled by the Rear Area, while equipment and battle casualties were recovered rearward to these same facilities. Except for its most elementary aspects, maintenance of platforms and systems was the responsibility of defense industry. In sum, the Rear Area in all of its aspects was and remains as centralized as physically possible.⁴ In contradistinction, whereas Western armed forces employ the principle of ‘pull’ logistics, the Soviet logistic concept (determined by mass effects) was based on the principle of centralized operational planning and execution to support a short, quick offensive campaign, i.e., ‘push’ logistics, via a forward-distribution system.⁵ This tradition has its antecedents in Tsarist times, when one considers the realities faced by military authorities: the immense size of the country and the huge differences between the small educated, professional officer corps and masses of peasant soldiers — concepts that ensured that centralized control was the only functional option.⁶ During Communism, this centralization of power was expanded, thereby solidifying this phenomenon in the area of military logistics.

It is important to stress the fundamental conceptual differences between Western and Soviet ‘logistics’ for a number of reasons. Most importantly, Military Economic Science in many legacy defense institutions remains largely untouched by Western thinking, Ukraine being perhaps a prime example. Even in those countries where the adoption of Western concepts has been more successful, one can still find logistics assumptions premised on aspects of Military Economic Science (e.g., centralization of control). Given the antithetical nature of these two concepts (i.e., logistics and Military Economic Science), it is all but impossible to enable mutual

⁴G. H. Turbiville, Jr., ‘Sustaining Theater Strategic Operations’, *Journal of Soviet Military Studies*, 1(1) (1988), pp. 81–107.

⁵J. Hemsley, ‘The Soviet Ground Forces’, in J. Erickson and E. J. Feuchtwanger (eds.), *Soviet Military Power and Performance*, Archon Books, Hamdon, CT, 1979, pp. 66–67.

⁶N. Stone, ‘The Historical Background of the Red Army’, in J. Erickson and E. J. Feuchtwanger (eds.), *Soviet Military Power and Performance*, Archon Books, Hamdon, CT, 1979, pp. 14–15.

understanding between Western and Communist legacy military officers and defense officials. Indeed, it can be just short of comical to watch such exchanges given the diametrically opposed ways in which the two systems *perceive* the most basic concepts of supporting the armed forces. It is little wonder, therefore, that in a classical Communist-model General Staff, there is no G-4, 'Directorate of Logistics', as logistics planning is subsumed by operational planning conducted at the national level, and support is defined as a civil responsibility. In consequence, one finds responsibilities for logistics often embedded within legacy (e.g., the Material Resources Sector in Serbia),⁷ or newly formed Ministries of Defense (e.g., Department of Armament and Military Acquisition and Development in Ukraine).⁸

When examining Warsaw Pact and Yugoslav concepts of logistics, one finds that the former adhered very closely to that of the Soviet model, whereas its application in the Yugoslav National Army (JNA) produced some notable differences. As to the former, support of the armed forces was molded in the exact image of these organizations' Soviet counterparts, with the added feature that much of the armed forces' materiel requirements was either supplied by the Soviet Union or produced in-country under agreement with Moscow.⁹ The only differences between Warsaw Pact and Soviet forces in terms of logistics is that in the former, their stocks were lower than possessed by Soviet forces.

The JNA logistical system was named 'Rear Security,' which contained all the elements of logistic support for the JNA and the individual republics' Territorial Defense Forces. In addition to traditional logistics, Rear Security included considerable institutional elements of the defense institution (e.g., musical, legal, geodetic services, and even military police).¹⁰ There appears to have been a uniquely Yugoslav approach to logistics that was a hybrid of Communist central control but with some elements of a 'pull' logistics concept. Of all European Communist armed forces, it is the only one that was influenced by *Western* military assistance. The US armed forces established a large technical assistance program that spanned the 1950s and constituted a major step toward its modernization.¹¹ A US American Military Assistance Staff, Yugoslavia was established (comprising some 30 officers and commanded by a General Officer), which was responsible for providing materiel to the JNA, as well as for the training on the use of these modern weapon systems (e.g., F-86 and F-84

⁷Serbia, Ministry of Defense, Defense Policy Sector, *White Paper on the Defense of the Republic of Serbia*, Media Center 'Odrbrana', Belgrade, 2010, pp. 105–114.

⁸Ukraine, Ministry of Defense, *White Book 2014: The Armed Forces of Ukraine*, Kyiv, 2015, p. 73.

⁹For an excellent treatment of how Soviet thinking was played out in operational planning see C. Donnelly, *Red Banner: The Soviet Military System in Peace and War*, Jane's Information Group, Coulsdon, Surrey, 1988, pp. 261–267.

¹⁰*Yugoslavia's Armed Forces*, Narodna Armija, Belgrade, 1980, pp. 122–143.

¹¹See B. Dimitrijevic, 'The Mutual Defense Aid Program in Tito's Yugoslavia, 1951–1958, and Its Technical Impact', *Journal of Slavic Military Studies*, 10(2) (1997), pp. 19–33; and 'Military Assistance Agreement between the United States and Yugoslavia', 14 November 1951, US Department of State, *Treaties and Other International Agreements (TIAS)*, 2349; 2 UST 2254.

Thunderjet fighters, M-36 Jackson tank destroyers). The total cost of the assistance package was approximately USD750,000,000.¹² That said, it is reported that the JNA experienced considerable trouble using US-provided equipment as it tried to understand and implement Western logistics concepts (particularly supply) in the 1950s.¹³ But some Western logistics traditions and concepts remain in practice even as the JNA progressively acquired proportionally more Soviet equipment after the early 1960s. What must also be assessed as significant is the role played by individual republics' Territorial Defense Forces, which were created in 1969. Each possessed their own headquarters and was completely independent in terms of operations, and they possessed decentralized logistics planning and depots.¹⁴ However, the quid pro quo for such autonomy on the part of these Republic forces included the accompanying financial exposure to provide for their own logistic support.¹⁵ This was not an inconsiderable cost. It was estimated that the cost of Territorial Defense Forces was the equivalent of 1 percent of Yugoslavia's Gross Domestic Product (GDP).¹⁶ Finally, what does distinguish the Yugoslav case from many Warsaw Pact members was its extensive indigenous armaments industry. For example, circa 1973, the Yugoslav armaments industry provided approximately 55 percent of the country's own requirements, largely from licensing agreements with the Soviet Union, as well as platforms and systems based on Yugoslav indigenous design.¹⁷

State of logistics in legacy defense institutions

Post-Soviet

In the Soviet system the ideology of manufacturing and its emphasis on quantity, at the expense of quality, an obsession with inputs and ignorance of outputs (let alone outcomes), the need for centralized control, and the assumption of omnipotence at the top, all combined to provide the Soviet Red Army with a massive and costly logistic support structure. These legacy concepts and supporting assumptions are still quite visible in post-Soviet republics. An inherent weakness of these concepts is that they are highly inefficient and are arguably incapable of supplying an armed force effectively

¹²See H. Menderhausen, *Territorial Defense in NATO and Non-NATO Europe*, R-1184-ISA, RAND, Santa Monica, 1973, p. 85.

¹³B. Dimitrijevic, op. cit., p. 28.

¹⁴See S. Drljevic, 'The Role of Geo-Political, Socio-Economic, and Military-Strategic Factors', in *The Yugoslav Concept of General People's Defense*, Mejunarodna Politika, Belgrade, 1970, p. 216.

¹⁵M. Pantelic, 'The System and Organization of National Defense', *Yugoslav Survey*, 10(2) (1969), p. 6.

¹⁶See US Congress, Library of Congress, *Country Studies, Yugoslavia, Territorial Defense Forces*, December 1990, [http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field\(DOCID+yu0183\)](http://lcweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field(DOCID+yu0183))

¹⁷A. Roberts, *Nations in Arms: The Theory and Practice of Territorial Defense*, Praeger Publishers, New York, 1976, p. 195; A. Bebler, 'The Yugoslav Crisis and the "Yugoslav People's Army"', *Zürcher Beiträge zur Sicherheitspolitik und Konfliktforschung*, 23 (1992), pp. 10–11.

outside of their prescribed operational plans developed by the Main Operations Directorate of a General Staff. In other words, it is problematic to assume that these logistical concepts would have any degree of flexibility to support maneuvers on a modern battlefield. Indeed, 'logistics' is possibly the wrong term to be used in this context, as in keeping with their Soviet legacy, successor armed forces continue to define this activity as 'supply', i.e., purchasing needed items (e.g., in Armenia's approach to logistics).¹⁸ Perhaps it is due to the fact that logistics consists of property, processes, and financial arrangements all embedded in laws and regulations, that its conceptual change has been so challenging, and it is difficult to find instances where there has been fundamental conceptual transformation. Thus, the observation made by one author in the case of Azerbaijan that '... logistics are now on par to the standards promoted by NATO in various action plans that Azerbaijan has implemented'¹⁹ is simply difficult to accept. How a profoundly legacy armed force could hope to understand the Western concept of logistics, let alone implement it in an armed force that remains based on Communist concepts, leaves the neutral observer unconvinced.

That said, in the Baltic States the adoption of Western logistics concepts has proceeded, particularly in light of Alliance membership.²⁰ However, there apparently remain vestiges of legacy 'push' assumptions embedded in the context of fixed territorial defense. While these armed forces have been on operations, the concept of 'pull' logistics has become de rigueur as these forces have been integrated into larger NATO nations' armed forces. To a large extent, when placed in the proper context of the Baltic States, an argument can be made that this conceptual duality is justified. Territorial defense, or 'total defense',²¹ is not necessarily inimical to the overriding NATO basic concept of collective defense. Indeed, in light of the fact that Norway and Denmark have long followed such a concept, and given their size and resources, some have argued that territorial defense is an eminently well-suited concept in the case of the Baltic States.²² Yet, other commentators have argued that the application of this concept is more nuanced than

¹⁸A. Yenokyan, 'Country Study: Armenia', in P. H. Fluri and V. Cibotaru (eds.), *Defense Institution Building: Country Profiles and Needs Assessments for Armenia, Azerbaijan, Georgia, and Moldova: Background Materials*, Geneva Centre for the Democratic Control of Armed Forces, Geneva, 2008, p. 18.

¹⁹K. Makili-Aliyev, 'Azerbaijan', in M. Majer (ed.), *Security Sector Reform in Countries of Visegrad and Southern Caucasus: Challenges and Opportunities*, Centre for European and North Atlantic Affairs (CENAA), Bratislava, 2013, p. 31.

²⁰Latvia's ambitious objectives to develop its logistics structures and procedures in anticipation of Alliance membership are detailed in Latvia, *Report on the State Defence Policy and Armed Forces Development*, Ministry of Defence, Riga, 2004, pp. 32–34.

²¹As officially defined by the Estonia Parliamentary, Total Defense consists of: '1) military defence, 2) civilian sector support to military defence, 3) international activities, 4) the internal security effort, 5) securing critical infrastructure, and 6) psychological defence': K. Salu and E. Männik, 'Estonia', in H. Biehl, B. Giegerich, and A. Jonas (eds.), 'Strategic Cultures in Europe: Security and Defence Policies across the Continent', *Schriftenreihe des Zentrums für Militärgeschichte und Sozialwissenschaften der Bundeswehr*, Vol. 13, Springer VS, Wiesbaden, 2013, p. 105.

²²See M. P. Davis, 'An Historical and Political Overview of the Reserve and Guard Forces of the Nordic Countries at the Beginning of the Twenty-First Century', *Baltic Security and Defence Review*, 10 (2008), pp. 171–201.

appears given such stark differences between the highly economically developed and homogeneous former, with the smaller, less-developed and more heterogeneous populated latter.²³ Be that as it may, there remains strong support, to varying degrees within the Baltic States (particularly Estonia)²⁴ for a *fixed* territorial defense inclination, if not overt orientation. In this particular model, units' mission sets performance can be severely limited and tied to a fixed territorial location. Therefore, an element of 'push' logistics could arguably make sense given the limited envisaged geographic area of operation and the narrow tasks to be performed. Conversely, fixed assets and delimited tactical tasks for maneuver forces on a modern dynamic battlefield is equally problematic. What is often lost in the larger context of other post-Soviet republics is the inherent inefficiencies of continuing to use legacy 'supply' assumptions and tables in an era when it is very unlikely that any of these countries will ever employ 'mass' operational concepts in a conflict. In light of such a change in operational orientation, it only makes sense to move toward adopting more deeply the 'pull' concept, if for no other important reason than for the sake of achieving efficiencies.

A detailed case of the challenges facing these defense institutions when addressing the reform of logistics is provided by Ukraine, which demonstrates the challenges of the task as well as provides an important case study of the effectiveness of legacy logistics concepts on the modern battlefield. Prior to the 2010 change in the Presidency (from Viktor Yushchenko to Viktor Yanukovich), reforming logistics was a priority in the State Program of the Ukrainian Armed Forces Development during 2006–2011, which envisaged the establishment of a single support system to improve flexibility of providing support to operational units.²⁵ This was envisaged to be achieved through the reform of the 'Rear Area Services', making it more responsive to the needs of commanders. President Yanukovich ended these initiatives and directed that there would be a centralized depot in each of the country's *oblasts* (regions), which regional governments had financial obligations for, as well as claims on, all as part of a move to adopt a territorial defense orientation but facing the West.²⁶ Yet the crucial missing factor has long been the lack of any military logistical management of the supply and

²³This argument is addressed well by H. von Riekhoff, 'Civil-Military Relations in the Baltic States', in N. Mychajlyszyn and H. von Riekhoff (eds.), *The Evolution of Civil-Military Relations in East-Central Europe and the Former Soviet Union*, Praeger, Westport, CT, 2004, pp. 106–107.

²⁴H. Mölder, 'The Development of Military Cultures', in T. Lawrence and T. Jermalavičius (eds.), *Apprenticeship, Partnership, Membership: Twenty Years of Defence Development in the Baltic States*, International Centre for Defence Studies, Tallinn, 2013, p. 108. This skepticism aside, Mölder makes a strong point that '... Estonia has taken its commitments to NATO very seriously. Despite its strong commitment to the Nordic model of military culture and suspicions of the European model, Estonia continues to support the transformation of NATO and the EU's CSDP in promoting cooperative security approaches for the current security environment'.

²⁵O. Ostapets, 'Guidelines of the State Programme of the Ukrainian Armed Forces Development during 2006–2011: Outsourcing in the Ukrainian Armed Forces', Defense and Security Policy Center, Kyiv, *Defense Bulletin*, 5 (2010), p. 17.

²⁶Ukraine, Ministry of Defense, *White Book 2014, Armed Forces of Ukraine*, Ministry of Defense, Kyiv, 2015, pp. 11–12.

distribution of supplies to units, i.e., the conflict in Eastern Ukraine has demonstrated the need for a military organization to be responsible for the supply of needed stores to deployed units on the battlefield. The current supply system remains based on requisitions, made in writing, which are reviewed/approved by the General Staff, distributed to various depots scattered across the country, and which are not linked by a common software management system.²⁷ Unity of effort was obviously not facilitated by the introduction of some Western concepts while keeping key legacy organizations. For instance, the Directorates of the Armament of the Armed Forces and the Logistics of the Armed Forces are under the Ministry of Defense. Conversely, the Main Directorate of Operational Support of the Armed Forces resides in the General Staff.²⁸ It is little wonder, then, that Volunteers and NGOs have been critical in providing needed supplies to Ukrainian forces fighting in Eastern Ukraine.²⁹

The Ukrainian case should constitute sober reading for officials in the region attempting to reform their own logistics structures as to the dangers of adopting elements of Western concepts while leaving their related legacy counterparts functioning (and, ergo, producing conceptual dissonance). If one accepts that the rationale for adopting a 'pull' logistics system is compelling from both operational effectiveness and financial efficiencies, the decentralization of authority of what is required to enable such a transformation of logistics principles is likely intimidating and explains why this has not been achieved to date. A culture that has the characteristic of 'high power distance'³⁰ will struggle with the ambition to enable tactical formations and junior officers and NCOs to determine requirements. Fundamentally, for a 'pull' logistics system to work, commanders need to be empowered to undertake tactical and operational planning. As an element of operational planning as practiced by Western armed forces, there must be an organic tactical capability to support the operational planning process by creating logistics estimates. This requires experienced logisticians on the staff of all tactical formations. This will be a huge challenge for these countries. Given the fact that tactical formations in post-Soviet armed forces largely do not have 'staffs', as they are expected solely to execute and not to 'think', there are insufficient numbers of officers or NCOs to develop such needed estimates.

²⁷This lacuna is being addressed by NATO and the donation of supply management software. See North Atlantic Treaty Organization, 'NATO's Practical Support to Ukraine', *Fact Sheet*, Bruxelles, February 2015.

²⁸See organizational chart of these organizations in Ukraine, *White Book 2014*, 2014, p. 73–74.

²⁹There is little formally published on the activities of the Volunteers and civil society's efforts to support the defense of Ukraine. Firsthand reports from soldiers at the front are numerous and explicit in their praise of Volunteers and criticism of the defense institution and particularly senior military officials. See, for example, 'Ukrainian Soldier Speaks—This Is Our Stalingrad: What It's Like to Serve on the War's Front Line', 7 August 2015, <http://warisboring.com/articles/this-is-our-stalingrad/>.

³⁰The extent to which the less-powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. See The Hofstede Centre, Strategy, Culture, Change, <http://geert-hofstede.com/countries.html>.

Equally challenging is the fact that many defense institutions largely conflate logistics with acquisition, and in consequence these responsibilities reside in Ministries of Defense. Therefore, armed forces play a minor role in determining logistical responsibilities via integrated planning even in the General Staff, as there is no tradition of a G-4 directorate. Given the enormity of the task of institutional change, it is probably safe to assume that the reform of logistics structures will be among the last elements of the defense institution to undergo reform in these republics.

Post-Warsaw Pact

These defense institutions have faced the challenge of adapting to new operational concepts to conduct expeditionary operations (both peacekeeping and major combat operations), while at the same time remaining saddled with predominantly legacy concepts, platforms, and weapon systems. Under normal circumstances, one might have expected an organization requiring such a fundamentally different orientation in its most basic activities and operations to adopt an incremental and/or phased reform program. After all, to alter the manner in which legacy platforms and systems could be supported is likely to prove difficult, given that their operational employment was likely left unchanged in most cases. Critically, a phased approach also would require the likelihood of dual structures and separate procedures, expensive capacities in a time when most defense budgets have been flat. Consequently, these armed forces have been moving forward — however, at different speeds, to be sure — to reform their logistics organizations. For instance, the Hungarian Strategic Defense Review of 1998 envisaged reforming the defense institution's logistics structures by adopting, *inter alia*, Western principles of privatization, outsourcing, civilianization, and integrated supply structures, all with the view of cost savings.³¹

It should be stressed that Western logistics systems are premised on a number of key principles, e.g., transparency and accountability, i.e., inimitable to legacy logic. Consequently, they have not been easily adopted in all of these countries, and even worse, many of them are 'adopted' in words only, while the substance remains actually unchanged ('façade adoption'). In the case of Romania, Watts documents how early in the reform process officials associated with the acquisitions and property management element of the defense institution were none too keen to see the introduction of the liberal democratic concept of transparency. Accountability was also stymied by the existence of a parallel budgeting process (which ended only in 2001) whereby funds for acquisitions and property management fell under the authority of

³¹Z. Szenes, 'The Implications of NATO Expansion for Civil-Military Relations in Hungary', in D. Betz and J. Löwenhardt (eds.), *Army and State in Postcommunist Europe*, Frank Cass, London, 2001, p. 91.

the General Staff, as opposed to the Ministry of Defense. The delay to remove these responsibilities from the armed forces needlessly postponed civilian oversight of this important function.³² Lastly, all of these countries have suffered from unclear institutional responsibilities and functions in almost all areas of national support to the armed forces. Nowhere is dysfunctional decision making made so embarrassingly public than in the case of a major procurement process, when mishandled. An excellent example of this is the untidy procurement by Poland of replacement multirole fighter aircraft.³³ According to Gogolewska, the Polish defense institution suffered from the predictable legacy pathologies: unclear division of functions among departments, overlapping responsibilities, poor coordination of work among various cells, and as a result, disjointed decision-making processes.³⁴

As a general observation, one can see nevertheless where these allied defense institutions have, to varying degrees, adopted Western nomenclature and organizations, if not fully the concepts upon which they are founded. To their credit, a number of countries, e.g., Czech Republic, started early on to reform this important element of their armed forces.³⁵ This endeavor has presented no small challenge, given that their legacy structures were designed to keep the organic support planning and execution structures small and concentrated at operational and even national levels. The supporting system that was built around army, corps, and divisional structures with all of the support assets were controlled at the top of these structures. Therefore, there has been a need for a concerted effort to redefine the logistics institution to enable the armed forces both to participate in expeditionary operations, let alone alongside allies in Article 5 missions. What one finds, however, is no small degree of conceptual incoherence. In the case of Poland, for instance, there are visible and recognizable Western organizations (e.g., a J-4 in the General Staff) and a Support Inspectorate acting as the Central Logistics Authority that has the responsibility to support the armed forces both abroad and in-country. Encouragingly, there are two logistic brigades (the 1st Logistics Brigade Headquarters in Bydgoszcz, and southern Poland with the 10th Logistics Brigade Headquarters in Opole), yet there are also 53 depots spread across the country, which suggests a continued strong orientation toward fixed territorial defense.³⁶

³²L. L. Watts, 'Stressed and Strained Civil-Military Relations in Romania, but Successfully Reforming', in H. Born, M. Caparini, K. W. Haltiner, and J. Kuhlmann (eds.), *Civil-Military Relations in Europe: Learning from Crisis and Institutional Change*, Routledge, New York, 2006, p. 23.

³³L. Dycka and M. Mares, 'The Development and Future of Fighter Planes Acquisition in Countries of the Visegrad Group', *Journal of Slavic Military Studies*, 25(4) (2012), pp. 544–546; 555.

³⁴A. Gogolewska, 'Problems Confronting Civilian Democratic Control in Poland', in H. Born, M. Caparini, K. W. Haltiner, and J. Kuhlmann (eds.), *Civil-Military Relations in Europe: Learning from Crisis and Institutional Change*, Routledge, New York, 2006, p. 110.

³⁵For a dated, but informative, review of initial efforts on the part of the Czech Army to initiate elements of Western logistics concepts and organization, see S. Lefebvre, 'The Army of the Czech Republic: A Status Report', *Journal of Slavic Military Studies*, 8(4) (1995), p. 731.

³⁶A. Ślodziński, 'Challenges in Logistic Support for Polish Armed Forces', Strategy Research Project, U.S. Army War College, 10 March 2010, pp. 5–6.

Post-Yugoslav

The JNA, along with its Romanian counterpart,³⁷ was doctrinally based on the principle of Total National Defense. As such, the JNA logistics concept was based on supporting the conscript JNA maneuver force in the field and the individual republic Territorial Defense Forces that would be engaged in circumscribed defensive and resistance operations. These concepts envisaged interior lines of communications and an extensive network of logistics depots, supported by a large and geographically dispersed defense industrial base. The economic coherence of the former Yugoslavia's defense industrial base largely dissipated with the implosion of Yugoslavia and subsequent civil wars. The communist managerial practice of overriding market forces to spread defense industry throughout the country (and particularly to exploit the defensive nature of Bosnia-Herzegovina's terrain)³⁸ could not survive independence, except in Croatia, Serbia, and Slovenia. Where it has survived, defense industries remain either as an element of the defense institution or enjoy close connection to them.³⁹

On independence, a continuation of the concept of territorial defense, supported by legacy concepts and infrastructure, was not a terribly problematic option, for after conflicts ended the mission-focus of the armed forces was initially modest and largely limited to securing their new borders and developing basic capabilities to support sovereignty protection.⁴⁰ With joining NATO's Partnership for Peace and contributing forces to peacekeeping operations, legacy fixed territorial-based logistics concepts increasingly needed to be reviewed with the objective of revising them. Croatia acknowledged the need to change its existing territorial-based force structure in 2005: 'the armed forces are more likely expected to take part in operations abroad rather than at home'.⁴¹ Yet, the challenge to achieve this objective has remained elusive. In its *2013 Strategic Defence Review* Croatia acknowledged that this objective has yet to be achieved.⁴² Certainly, one would have thought that the adoption of NATO nations' concepts, such as expeditionary logistics and increasingly relying on the civilian sector's logistics backbone via commercial and HNS arrangements, would have become a *sine qua non*.

³⁷A. Alexiev, 'The Romanian Army', in J. R. Adelman (ed.), *Communist Armies in Politics*, Westview Press, Boulder, 1982, pp. 156–159.

³⁸See C. R. Shrader, *The Muslim-Croat Civil War in Central Bosnia: A Military History, 1992–1994*, Texas A&M University Press, College Station, 2003, pp. 17–18.

³⁹There is little substantive academic treatment of the Serbian defense industrial sector. A general description can be found in Serbia, Ministry of Defense, Strategic Planning Department, Defence Policy Sector, *White Paper on Defence of the Republic of Serbia*, Belgrade, 2010, pp. 112–114; 'UK Trade and Investment Market Brief: Serbia', London, 2013, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283300/UKTI_DSO_Market_Brief_Serbia.pdf.

⁴⁰The existing armed forces structure [of Croatia] has been oriented towards developing and maintaining territorial-based self-defense capabilities'. Croatia, Ministry of Defense, *Strategic Defence Review*, Zagreb, 10 November 2005, p. 15.

⁴¹*Ibid.*, pp. 15 and 17.

⁴²Vlada Republike Hrvatske, *Strateški Pregled Obrane*, (No. 73/2013), 25 July 2013, p. 30.

To be generous, one can assess progress in this area to have been modest. Legacy concepts, assumptions, and organizations remain entrenched in law, regulation, norms — and most challenging — within the training and education institutions in these countries. Thus, to varying degrees, one still finds ‘push’ logistics present within the individual and collective mentality of these defense institutions and armed forces.

Perhaps given the general limited expertise regarding defense outside of the armed forces in these countries (Slovenia being a major exception), there has been limited understanding among the political classes of these countries about the potential efficiencies that could be found by adopting modern logistics concepts. And, to be fair, the particularly JNA legacy that relates to infrastructure was not terribly conducive to enabling civil officials to frame properly the problem they face. Legacy ‘assumptions’ remain unchallenged/unassessed as they relate to managing the sprawling post-JNA defense estate in these republics. To give one an idea of the size of this particular problem, in the case of Montenegro, in 2010 it declared that it possessed 240 defense-related institutions that required it to spend 220,000 euros per year simply to guard them.⁴³ Further complicating consolidation is the continued JNA practice whereby utilities and consumable expenses at bases were not managed and financed locally but rather were centralized, thereby removing *incentives* by which local commanders and base managers could optimally and efficiently manage resources.⁴⁴ Likewise, residual Serbian defense industries continue to exist, but with the stated proviso that they must be increasingly self-sufficient. That said, their mere existence needs to be carefully considered as they perpetuate the legacy practice of intellectually focusing the defense institution to procurement and acquisition of the products of these industries, rather than turning the question around to ask: what do the armed forces need to enable them to execute their new missions, i.e., expeditionary operations, or possibly even a more mobile and operationally maneuverable territorial defense required by the transition to a smaller and professional force? This requires a completely different approach, as it concentrates responsibility for the development of support requirements at the tactical level under the direction of Service Chiefs and Joint Operations Commanders, and not from the top, i.e., at Ministries of Defense.

There has been only modest reform progress in most countries. Macedonia was able to develop and publish a basic national logistics concept in 2004, which has provided the basis for the development of subsequent and procedural manuals. Yet, for the full implementation of a ‘pull’ logistics concept to take hold, the entire armed forces need to change. The

⁴³Montenegro, *Strategic Defense Review of Montenegro*, Podgorica, Ministry of Defense, June 2010, p. 57.

⁴⁴See interview with former Serbian Minister of Defense Dragan Sutanovac, who discusses these challenges in, ‘Change of Pace, Country Briefing: Serbia’, *Janes Defence Weekly*, 7 September 2011, p. 34.

Montenegrin logistic capabilities remain very modest and are largely based on depots and the services providing for their own requirements, as needed. Related to all armed forces, to adopt fully Western concepts tactical units will require trained and experienced NCOs and officers to draft accurate logistics estimates, and concomitantly, existing organizations throughout the entire defense institution need to be reviewed to determine if their continued existence is required. Delegation of financial authority to lower-level commanders and staff is needed to enable the full implementation of HNS agreements in order to obtain cost-effective support from commercial suppliers, either within a country, or on deployments. Moreover, in order to move toward adopting a modern supply system, a dedicated IT backbone and software is needed and has been slow in coming to many of these countries. In one case, operational logistics planning was sidetracked by the terribly mistaken belief that this could take place within an imported US model of Planning, Programming, and Budgeting system (PPBS). In short, this is one area of defense management and planning where legacy assumptions and principles persist, are often ignored, and go dangerously unaddressed, all the while they continue to bleed defense budgets, while not providing the armed forces with the support they will need to meet currently declared, let alone future, missions.

Impediments to change

Since the end of the Cold War, what one can observe is that within legacy defense institutions, 'logistics' has slowly been adopted as the widely accepted name of this activity, but Western concepts that support the term have not fully taken hold as a general observation. The question that begs to be posed is, why is it that the adoption of Western logistics has been so challenging for these defense institutions? The author posits that the key obstacle to adopting Western logistics practices is due to the nature of legacy concepts that are enshrined in law, institutions, training, and formations. In [Table 1](#), one can see a vivid representation of Western and legacy concepts as they relate to the support of armed forces. It is arguable that these concepts are antithetical. In consequence, they are not capable of coexisting in a functional sense in an institution. As one officer from a Central European country stated to the author, the admixture of legacy and Western logistical concepts in his armed forces has inadvertently produced a hybrid logistical (a 'push-pull') system that is simply dysfunctional. The continued practice of allowing these concepts to continue to drive the logistic support elements of these armed forces is not inconsequential to them being capable of performing on operations. Either through the active or passive utilization of the concepts, their negative effect on the effectiveness and efficiency of these defense institutions is palpable. For instance, the continued legacy practice of centralizing decision

Table 1. Antithetical Logistical Concepts.

Principles	Logistics	Rear Area (Security)
Guidance	Government policy	Военная доктрина (<i>Vayennaya daktrina</i> , 'Military Doctrine')
Concepts	Supply, procurement, maintenance, private industry	<i>Military Economic Science</i> , design bureaus, government-owned defense industry
Determining demand	Government determines how much to spend	Armed forces determine what society <i>must</i> provide
Key assumption	Decentralized	Centralized
Customers	Lower-level operational commanders	General Staffs, higher-level operational commanders
Ownership	MoD/Defense staff/agencies	MoD, defense industry
Requirements determination	Operational commanders via the Estimate process	General Staff via centralized operational planning
Execution	'Pull' by commanders	'Push' by General Staff
Characteristics:	<ul style="list-style-type: none"> • Flexibility, with inherent need to supply all units • Maintenance is operationally focused • Software-based 	<ul style="list-style-type: none"> • Rigidity and predictability, allows battlefield exploitation, but abandons some units • Maintenance is largely provided by defense industry and locked to it • Paper-based

making of logistics works against the Western concept of delegated command that empowers commanders via the utilization of the 'pull' logistics concept. Taking the centralization point further, the continued existence of state-owned defense industry co-opts the delegation of maintenance responsibilities to tactical units.⁴⁵ While there is no argument that NATO members in particular should be able to provide for their own national defense (as articulated in Article 4 of the North Atlantic Treaty),⁴⁶ one could take issue with the continued practice of maintaining fixed supply depots, rather than creating greater logistical capability to support operational mobility. Thus, one can only hope that the Polish logistics system of fielding two mobile support brigades and 53 supply depots (the latter constituting fixed targets) is still in the midst of transition to a more mobile force.

Another contributing factor to impeding change has been an atrophying of the operational orientation and purpose of logistics. Since the end of the Cold War, very few armies have fundamentally changed their tactical unit structures. For example, in legacy structures, battalion command posts were expected *only* to execute orders (e.g., in some cases, consisting only of a commander, driver, and signals NCO) and did not even possess a second command post with redundant communications, thereby precluding them for delivering logistic support, as is the practice in the West via the Estimates

⁴⁵For an intriguing discussion of the differences between the concept of maintenance, as it is understood in a Western sense, with its legacy counterpart, 'technical assurance', see D. Lapadat, 'Evolutions in the Romanian Armed Forces Logistics: From Technical Assurance to System Life Cycle Management', *Romanian Military Thinking*, 3 (2014), pp. 104–113.

⁴⁶Article 3 states that Allies, through 'self-help' and 'mutual aid', will develop 'their individual and collective capacity to resist armed attack'.

process. In all too many legacy armies, these have still yet to be created, let alone understood, even in some new NATO countries. Moreover, following the Cold War the subsequent adoption by many countries of territorial defense concepts resulted in stores being based near units (e.g., Poland). The pernicious result of such decisions has been the atrophying of dedicated transport/supply. To save money, defense institutions have cut exercises severely, so supply training has come to be seen as an unnecessary activity and has been lost (e.g., Ukraine). As acknowledged by Bulgarian officials, military medical services have also become territorially localized and have become completely hospital-based, at the expense of being capable of deploying field medical facilities.⁴⁷ As a result of these trends, Ministries of Defense have come to exercise active control over one part of the logistic system, i.e., procurement, thereby reinforcing this as the dominating concept in these organizations. A consequence of this evolution is that few legacy defense institutions support deployed forces on their own, and one can question how capable they would be of supporting maneuvers for any length of time even on their own or neighboring territory. They are simply lacking in the necessary personnel, doctrine, deployable support units, or requisite training arguably to accomplish either.

Solutions

Clearly, bridging this deep conceptual divide will not be easily accomplished, nor will this be accomplished quickly. Fundamentally, what is needed in these legacy defense institutions is a new 'policy framework' that necessitates the wholesale review and revision of all associated concepts and assumptions that relate to logistics. *Policy framework* in this context is defined as the practice that all activities within the organization adhere to the policies and priorities established in the framework whose purpose is to create defined outcomes. Critical to the success of any reform effort must be the practice of tying money to reform, which could very likely imply being done in a mutually exclusive manner apropos existing organizations. Some key issues that require attention and revision include:

- (1) New national logistics concepts that redistribute the roles and missions between Ministers of Defense and General Staffs. For example, Ministry of Defenses' supply directorates must be realigned to be responsible more for *how* to buy what is needed by the armed forces, as opposed to *what*.
- (2) Logistics must be defined in the new policy framework as constituting more than procurement, outputs from state-owned defense industry, which are

⁴⁷Bulgaria, *White Paper on Defence and the Armed Forces of the Republic of Bulgaria*, Ministry of Defense, Sofia, 2010, p. 65.

all depot-based and centrally determined. In essence, logistics needs to be defined in policy and concept that constitutes meeting the material requirements of commanders.

- (3) Ministries of Defense need to collate and validate material requirements but allow defense agencies to manage acquisition.
 - (a) Tactical formations must be able to determine their logistics requirements, via the Estimates process, rather than being determined centrally by General Staffs.
 - (b) State-owned defense industries need to be privatized. They bleed defense budgets, rarely provide what commanders need and at the quality commanders expect, and offer huge opportunities for corruption.
- (4) Decision-making authority for particularly consumable purchases must be decentralized to create efficiencies.
 - (a) Commanders must be able to determine how to use infrastructure resources, as opposed to being managed centrally. Budgets for consumables need to be selectively delegated to commanders and formations. (Utilities are still invoiced centrally in many countries, and this must be delegated to commanders with incentives to encourage the saving of money.)
 - (b) Greater policy emphasis must be placed on out-sourcing where it achieves efficiencies, except where the forces require the capability for deployments. The practice needs to stop whereby depots try to provide all supply requirements while ignoring opportunities at out-sourcing and using the global civilian logistics backbone.

When formulating policies to assist legacy defense institutions to reform their logistics concepts and organizations, Western planning assumptions equally need to be fundamentally reviewed and revised to include the following factors:

- (1) Understand that the Western concept of logistics, as an operational enabler, is not fully understood in legacy defense institutions.
- (2) Critically, there is an immediate need for defense institutions to create military logistics supply organizations, which include commanders, headquarters, dedicated and redundant communications, and transport.
- (3) As Communist and Western defense concepts are antithetical, it must be understood that they cannot coexist in the same institution.
 - (a) Western officials must insist as a precondition to assisting the reform of legacy 'logistics' organizations that recipient countries must accept the concept of mutual exclusivity. Thus, new concepts can only be introduced when their legacy counterparts have been retired, i.e., organizations must change and staff be retrained.

- (b) Failure to retire legacy concepts will result in a mishmash of concepts that will struggle among themselves and produce dissonance and waste (i.e., conceptual spaghetti).
- (4) Only within the context of a new logistic policy framework should Western support shift to including logistics commanders and staff on Western exercises. Related is the important necessity of ensuring that legacy armed forces are introduced to, and supported in, the development of the estimates process.

Conclusion

That there are considerable challenges to European Communist-legacy defense institutions to overcome before they can fully embrace Western logistics concepts there should be little doubt. A number of factors have contributed to the situation where change has been impeded as specifically related to logistics. Legacy laws, organizational structures, weapon systems, and platforms have combined to make the transition to the Western logistics model difficult. However, what has been missed by many Western officials is the lack of recognition and understanding of the dominant role played by the persistence of legacy logistics concepts, i.e., Soviet Military Economic Science. As argued in this essay, there should be little doubt that legacy logistics concepts are not merely different from their Western counterparts; they are antithetical, and as such, cannot coexist together in the same organization. It is little wonder, therefore, that Western advice and assistance has been generally unsuccessful in enabling these defense institutions to effect fundamental change in the orientation of their approach to the support of their armed forces.

The challenge, therefore, both to legacy defense institutions, as well as Western donors of advice and assistance, is twofold. First, any assistance in this area that can possibly hope to be meaningful must address the wide gap between Western and legacy logistics concepts. That the gap is wide is clear, but what is less well-understood is that these concepts are mutually exclusive. Thus, legacy defense institutions must accept that without a systematic approach that replaces legacy concepts in concert with the introduction of new, modern, and Western approaches, these efforts have a very poor outlook for success, just as poor as their current track record of achievements. An intriguing proposal to discern a successful change method could be to experiment with the creation of parallel organizations, with newly trained personnel, based on Western concepts and supported by new operating assumptions with the objective of creating new institutional logic. As Western concepts are progressively implemented, their legacy counterparts and their home organizations can be closed. Second, it needs to be understood that the only means by which legacy logistics concepts can be identified, replaced, and new Western ones introduced into these defense

institutions is through changes in national-level policy. This is a profoundly political issue that needs to be addressed within Ministries of Defense with input from armed forces. By extension, therefore, Western and Eastern defense officials need to acknowledge that the challenge is not one that can be successfully framed, let alone addressed, as a solely technical military problem that can be successfully addressed through the provision of Western training, particularly at the tactical level.

In the end, the experience of NATO and its nations of providing logistics support to legacy armed forces on peacekeeping and combat deployments, let alone conducting multinational logistics exercises, could well have unwittingly masked the depth of the enduring reality of legacy logistics concepts. By focusing on the external operational aspect of support of these armed forces, the reality of the depth of the problem either went unnoticed or ignored. However, in a Europe where Russia has adopted a more muscular foreign policy toward its neighbors, there should be new immediacy to recognizing the need to reform the logistics capabilities of legacy defense institutions. Addressing the conceptual challenge should be a priority, from which all other advice and assistance should flow and support.

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