

GAIDAR INSTITUTE FOR ECONOMIC POLICY

RUSSIAN ECONOMY IN 2013
TRENDS AND OUTLOOKS
(ISSUE 35)

Gaidar Institute
Publishers
Moscow / 2014

UDC 330.34(470+571)"2013"
BBC 65.9(2Poc)
Agency CIP RSL

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R95 **Russian Economy in 2013. Trends and Outlooks.**
(Issue 35) – M.: Gaidar Institute Publishers, 2014. 516 pp.

ISBN 978-5-93255-393-0

The review provides a detailed analysis of main trends in Russia's economy in 2013. The paper contains 6 big sections that highlight single aspects of Russia's economic development: the socio-political context; the monetary and credit spheres; financial sphere; the real sector; social sphere; institutional challenges. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts.

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ISBN 978-5-93255-393-0

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Defense economy and military reform in Russia in 2013

The national military establishment of Russia continued developing in 2013 in the same manner, i.e. ill directed, as it was launched in and proceeded after 1992. This refers to both the reforms of the Ministry of Defense of the Russian Federation and the modernization of Russia's Armed Forces (AF).

Technically, in 2013 Russia had all the documents required for stagewise development of its military potential, namely the State Armaments Program for the Period of 2011–2020 (SAP-2020), the National Security Strategy (NSS-2020), and the Military Doctrine of the Russian Federation. The foregoing documents were approved by the then incumbent Presidents.

However, not all of these documents saw successful implementation, in particular in addressing socio-economic problems faced by the military personnel. All in all, the Russian military personnel didn't seem to feel content with a "new image" of the Armed Forces and the Ministry of Defense of Russia. A fraud row broke out nationwide on the eve of 2013. President Putin had to replace those in charge of the military development program. Strategic miscalculations were revealed.

Therefore, the year 2013 saw an unscheduled turning point in the development of the national military establishment in Russia. After the Russian President made short-notice replacements of those military high-ranked officials who dishonored their names, "by-default" civil servants began to view the strategic concept of the military reform only through Presidential orders. Under the circumstances, however, pursuant to the regulations of a law-governed state and the management theory, the NSS-2020 and the Military Doctrine should have been updated and the unsuccessfully launched SAP-2020 adjusted so that all those involved in the management can consider these documents as long-term guidelines.

Conceptual changes required to the national military establishment of Russia still remain to be defined clearly. Even a decision to introduce a new branch of troops capable to conduct information-specific (cyberspace) operations was announced but not covered in the strategic planning documents. In 2013, the newly appointed officials in the Ministry of Defense neither recalled nor reminded of the NSS-2020 and the Military Doctrine. All of them were engaged in correcting the "errors" committed by the replaced military officials.

It should be noted that a few years ago, after the United States and some other countries introduced similar troops into their armed forces, the Kremlin didn't rush into commissioning the Ministry of Defense with the same task, restricting itself to setting respective tasks to other government agencies, mostly the Federal Security Service of the Russian Federation (FSC), which can be explained by that protection should be provided to individuals (the population) as the key target of potential information wars. Moreover, the situation in the area of information changed especially with regard to the population. For example, the share of adults with cell phones increased to 91% in Russia while Internet services expanded. Consequently, the role of government-controlled television and printed media declined. Even when natural emergencies occurred, the population received a great deal of information from non-government sources of information, as was the case with the flood in Krymsk, the asteroid crash in Chelyabinsk etc., when mass communication sources outstripped government-controlled mass media. This explained why the Kremlin was so cautious about the recent war events in

the Middle East which showed that mass communication sources may well have an unwanted effect on the noncombat (until a certain point) population and their uncontrolled “self-organization”.

It was later realized that modern information (cyberspace) systems may impact not only humans but also fully computerized technical (military) systems with automated control processes. This implies that it is not only the FSC of Russia and similar agencies, but also the Ministry of Defense which operates military and technical systems in the Armed Forces and seeks various ways of impacting the systems operated by potential enemy forces, that should be engaged in planning and running information wars.

There was another reason why foreign state’s leaders expressed concerns about means of information wars in 2013, i.e. the situation was further aggravated by a recession that hit most of the economies and impacted both respective government agencies and the population who were discontent with degrading living standards.

Addressing these issues, a few states updated the development concept of their national defense and security agencies, especially the armed forces. The goals and objectives of military agencies were revised. As a rule, new insights of foreign state leaders were documented based on serious scientific research.

For instance, a new document – France New Strategy: The 2013 White Paper¹ – was adopted in April 2013. Without setting ourselves a task of comparing this document with the NSS-2020 (or a package of the provisions set forth in President Putin’s orders), we can highlight the following. According to the developers of the new French document (the fourth one in the history of France), it was an indication of a new stage in ensuring the national security of both France and the entire Europe”. Furthermore, many strategic provisions of the previously developed concepts were kept intact. However, some significant innovations were introduced. A key aspect of the document concerns the establishment of an agency for counteracting information and cyber threats (l’Agence de la sécurité des systèmes d’informatiques) aimed at both ensuring national security and being engaged in offensive operations.

Nonetheless, French military (national defense) outlays are expected to decline despite its growing geostrategic ambitions. The developers of the strategy suggest that financial supply to future operations should be shared among the EU members. Other states including the United States, also had to update their military development concept and limit the traditional military (national defense) outlays to keep their population stay happy.

This review is not intended to cover such issues as whether or not Russia may begin to make up a new (or update the old) development concept (strategy) of its Armed Forces and, most importantly, dare to curtail its military (national defense) outlays.

However, the following relevant aspects are worth noting. First, growth in the federal budget military (national defense) outlays after 2010 and their bias towards spending on the Armed Forces equipment, so-called “development outlays”, against spending on the Armed Forces maintenance (“consumption”) was based on disinformation rather than reliable military and

¹ Watanabe L. France New Strategy: The 2013 White Paper]. URL: <http://www.isn.ethz.ch/Digital-Library/Publications/Detail/?lng=en&id=169217> (date of access: 15.07.2013). Summary translation into Russian is available at: <http://csef.ru/index.php/ru/oborona-i-bezopasnost/project/340-voenno-strategicheskie-otsenki-i-prognozy/1-stati/4742-strategiya-frantsii-2013-ofitsialnyj-dokument>.

economic data. The authors of this review repeatedly pointed to such facts in their previous publications¹ with reference to the primary source of information, but the facts were ignored.

Second, it is not the President but lower level officials who need the documents to be refined and updated so that they can better understand the concept of the modern modernization and “horizontal” cooperation in addressing sub-problems and tasks. Furthermore, it would be useful to raise general public awareness of the changes to the Russian Armed Forces.

Topic military construction issues and how they can be addressed

None of the military and political leaders, or an insider made an attempt to explain publicly the economic feasibility of the military reform concepts and their actions as administrators, so that it can be available for analysis by independent experts. No speeches for the population and reporters can replace a scientific discussion with independent experts.

Under the circumstances, Sergei Shoigu was unexpectedly appointed as Russian Defense Minister. He took the office predictably beginning with addressing the issues which cannot be considered either topical or requiring new substantial outlays, and investigation into sophisticated fraudulent schemes.

Shoigu announced his first decision at a meeting with the senior executives of the Ministry of Defense which was held immediately after his appointment as Minister of Defense. He issued an order directing cadets from the Suvorov Military School and the Nakhimov Naval Academy to take part in Victory Day Parades. So they did on May 09, 2013. Additionally, the Minister announced his plans to reassign the control of military higher education institutions which under former Minister of Defense Serdyukov A. used to be coordinated by the Ministry of Defense Education Department, to Commanders-in-Chief and branch commanders on whose behalf the military personnel are supposed to be trained as new weapons come into operation. This was done too.

The Defense Minister’s statements concerning the military uniform received a positive response. Additionally, other minor, as it may seem, but important daily-life issues have been addressed.

The concept of rational military formation structure and dislocation of troops has been refined. In particular, the “division – regiment” organizational structure was restored in the Air Force (AF), as well as air defense and aerospace defense brigades were reorganized into air defense divisions. The AF deployment became to be based on the “one regiment – one airfield” principle.

Much more complicated is the situation with recovering the “lost” assets, i.e. those that were virtually stolen at the time when A. Serdyukov held the Minister’s office. The case is doomed to encounter challenges, because the skillfully disguised allegedly legal nature of the deals requires filing legal actions aimed at terminating and invalidating such deals.

It would be much easier to predict what is going to happen with the excessive stock of non-core military assets (property) left at the Ministry of Defense. It is the Federal Agency for State Property Management (Rosimushchestvo) that is expected to be assigned to dispose of such assets (property).

The Ministry of Defense is still facing the issue of getting rid of unneeded stock of outdated military hardware, a total of almost 300,000 tons of dangerous “metal scrap” which need to be

¹ *Tsymbal V. I. Military construction plans need to be adjusted // Ekonomicheskoye Razvitiye Rossii. 2013. No. 8. pp. 49–52]*.

guarded for the time being. Not only may long-lasting efforts to destroy these hardware using the Ministry of Defense's resources result in manpower losses but they are also inefficient.

Of great importance is the new Defense Minister's statements about the Ministry getting more transparent, making public its plans and performance results. The introduction of conference calls with varying composition of participants, as well as publishing the results of such conferences in mass media has proved efficient. Although the expected release of the Ministry of Defense White Book was delayed, the Ministry published its MO-2013 Report on the official website, which can be considered a positive result¹.

Summing up the results of Shoigu's actions in 2013, most of them can be considered efficient. However, it might take long to see the effect of such actions.

Military recruitment policy and procurement

The appointment of a new Defense Minister and reappointment of some of the top executives at the Ministry of Defense was followed by a proposal to make adjustments to, above all, the military recruitment policy (MRP), and bring back all skilled specialists. Regrettably, this hardly seems feasible though, after so many years of "reforms" and because of personnel ageing, loss of research schools and succession.

The originally initiated by Serdyukov A. and Makarov N. reduction of total commissioned officers strength from 335,000 to 150,000 persons and subsequent increase up to 220,000 has raised the question of whether the military recruitment policy was smart enough? Is it well estimated for the time being? Isn't this number of regiment officers too big for the announced manpower strength in the Armed Forces totaling 1 million? The Land Force and Navy need specialists at the low and mid-levels of military command.

Furthermore, a few so-called "science squadrons" staffed with "most gifted graduates" were introduced into the Armed Forces. It will take long, however, until any visible results can be achieved.

At the same time, this has been opposed by those lobbying traditional-type military education institutions and training programs. The lobbyists aren't concerned by that military schools and higher education institutions should graduate about 10,000 persons annually to maintain the number of military officers at a level of 220,000. Any bigger number of graduates will be excessive. Nevertheless, higher military schools accepted cadets were accepted 15680 in 2013.

There is misbalance in selecting and training the required number of enlisted military personnel and junior command personnel for the voluntary contractual military service. The President's call for increasing the number by 50,000 annually means not only selecting newly contracted military personnel, but also retain though any possible incentives those who serve well. Furthermore, numerous studies show that the amount of military compensation (MC) including other incentives should be higher than the national average wage (AW). At present, the basic MC, net of new increments, amounts to about Rb 20,000 per month, while the national average wage is near Rb 29,000. No changes to this are expected in the short run. New increments will be introduced for some but not all of the military personnel. They managed to increase the number of contracted personnel in the Russian Armed Forces to 225,000, whereas the plan was to increase it to 241,400 at 2013 year-end, and this despite the fact that enlistment in 2013 reached 81,000, i.e. by 27% more than planned. At the same time, a bigger than

¹ <http://vil.ru/files/result2013/index.html>

expected number of the previously contracted military personnel refused to extend their contract, whereby showing low incentives to do military service.

President Putin pointed out that five years ago about Rb 600bn were allocated annually to the Ministry of Defense. The sum was subsequently doubled, and in 2014 it will amount to Rb 2,3 trillion. Furthermore, most of the increment refers to the equipment of the Russian Armed Forces. The Government was and is “running short of the money” which is required to increase the MC to contracted military personnel (approximately Rb 30bn by estimates). And, however, there is no money to finance the promised indexation of pension benefits for the retired military personnel, and many other costs falling under the “consumption” category.

Total manning level in the Russian Armed Forces remains the same, around 82%. One may reasonably ask whether the value of this indicator is substantiated, whether it's high time to recognize a strength of less than 1 million. It is more important for the civil society to know whether this country really needs enlisted military personnel in time of peace. Even considering that the term of their basic training for full military service was reduced down to four months by making the training more intensive, one may reasonably want to know whether these personnel are able to “pay off” within the eight months left for service?

There are more issues that need to be addressed. It is not for the first time that Russia's people were assured that only contracted military personnel would be engaged in hotbeds of tension¹. There, however, are lots of facts of repeated failures to keep such promises. Some of the procurement issues, above all, the provision of military personnel with living accommodations need to be addressed too. Although a huge success has been achieved here, the dynamics runs counter to common sense, i.e. the greater is the number of provided living accommodations, the tougher is getting the situation with the “homeless” military personnel on the waiting list, which is also influenced by their (officers who were and are to be dismissed) requirements to the quality and location of the provided living accommodations. Vague differences between budget and extrabudgetary resources required to satisfy the need for living accommodations make the system tend to be less transparent, thereby making corruption unavoidable in this area.

Perhaps, this is the reason why the Defense Minister suggested that from January 1, 2014 it is not residential apartments but an adequate amount of lump sum payment that should become the key form of providing the military personnel with living accommodations², which, as he assumes, will make it easier for those in the waiting list. A respective law was adopted in December 2013.

Enhancing operational training of the military personnel, units, forces, and conducting joint exercises can be regarded as positive results for the MRP.

Summing up the achievements and lost opportunities regarding the MRP pursued in 2013, what should not be left unmentioned is the initiatives launched by the Ministry of Defense and the legislative bodies at the end of 2013, when it became clear that the planned manning in the Armed Forces was facing even more challenges. A series of amendments to the applicable laws and regulations were drafted and submitted to the State Duma for consideration. However, there are no guaranties of success, because the two key factors still remain to be overcome, namely compulsion to military service (regarding to the enlisted personnel) and greediness (regarding to those who serve on a contractual, voluntary basis).

¹ *Gavrilov Y.* Professionals to be engaged // *Rosyiskaya Gazeta*. 2013. February 15, 2013.

² http://ria.ru/defense_sofety/20130204/921125299/.html

Military-technical policy and supplying new weapons to the Russian Armed Forces

It is difficult to analyze the results achieved in 2013 in the key areas of the Russian military-technical policy (MTP) because of numerous promises that were made in substantiating the level of military expenditures on its implementation, and indistinctness of a comparative analysis of not only actual achievements, but also lost opportunities.

As a reminder, a promise was made not only to increase supplies of new weapons and military equipment (WME) to the Russian Armed Forces, but also to address a few other issues, such as:

- 1) providing a comprehensive development of the military-industrial complex (MIC) of the Russian Federation, its technical equipment, and manufacturing personnel training;
- 2) manufacturing WME not only for the Russian Armed Forces, but also as part of the military and technical cooperation with other countries (export and import);
- 3) maintaining WME in a serviceable condition fit for combat;
- 4) developing new military technologies and latest combat weapons, as well as training of engineers and designers specializing in modern technologies;
- 5) sharing latest technologies and design concepts with the civil sector and vice versa.

It is well known that these objectives were formulated inexplicitly, “literary”. They were set in the Armed Forces Long-term Strategic Objectives Plan, the SAP-2020 for the period of 2011 thru 2020, the MIC development programs, and specified in government defense orders (GDO), and a series of documents. Additionally, the objectives were ascertained as part of continuing management of the development of the Armed Forces and the MIC by Russia’s political and military leaders who often function in the manual control mode.

However, the legal and regulatory framework failed to work the way it was supposed to. Although Deputy Prime Minister Dmitry Rogozin expressed his appreciation to the legislators for drafting the required laws, “We have done what had to be done and the President signed the federal laws we adopted by the upcoming 2012 year, above all, the Federal Law No. 275-FZ On the Government Defense Order, the Federal Law No. 44-FZ On the Contract-Based System of Procurement of Goods, Works and Services for Public and Municipal Needs which is coming into force. And, of course, the Federal Law On the Advanced Research Foundation¹.

Speaking of the 2013 results, it should be noted that any state armaments program (SAP) has its initial, most essential 5-year implementation period, i.e. the current program has the same period of time spanning between 2011–2015. Therefore, the year of 2013 is in a sense the principal year over the period under review, although the results of that year shouldn’t be set apart from the SAP failures in the two preceding years.

Additionally, preparations for the development of a new SAP-2025 for the period of 2016 thru 2025 have kicked off. The MIC top executives should take as obligation President Putin’s words that the Russian Federation will not expect to incur such huge SAP costs in the future (no exact period was specified).

These seemingly natural issues have so far been kept outside the scope of issues that aren’t supposed to be addressed or even discussed. It is not until the very end of 2013 that President Putin mentioned the issue in his Presidential Address and called for a solution. And, let’s face it, he did it in the right time, because a new budget for the period of 2014 thru 2016, i.e. beyond the first 5-year period of the SAP-2020, has been approved. However, it contains no signs of

¹ Rogozin D. Reviving the defense industry. // VPK No. 49 dated 18.12.2013.

financing the transition to a closer end of a period of highest ever costs on the equipment of the Armed Forces.

The still remaining interpretation of the current MTP in Russia keeps the principle of “grab-swiftly-as-much-as-you-can” prevailing and most important incentive for many Russia’s top managers. Therefore, the struggle over budget allocations keeps going, and President’s words about inevitably upcoming military budget cuts are being ignored.

The net effect is that there is no integral vision at successful development of the MIC, equipment of the Armed Forces, let alone a positive effect of the MIC on the development of the national economy despite unconditional success on some of the five aforementioned objectives. This can be illustrated by the following.

MIC development in the Russian Federation

Considering that the Russia’s military establishment has been assigned the task of making the current Armed Forces into innovative ones, the former needs latest WME samples which can be provided through further upgrading the research-and-technology and engineering-and-manufacturing framework at MIC facilities. A respective MIC modernization program was developed and resources allocated.

The problems faced by the MIC were discussed extensively late in 2013¹ during a meeting attended by Deputy Minister of Defense Yury Borisov, senior officials, and deputies CEO’s of major state-run corporations and holdings, i.e. arms suppliers. The discussion was dedicated to the GDO and its role in the implementation of the SAP-2020.

According to the Deputy Defense Minister, “the use of public resources is subject to a series of conditions virtually diluting the very idea of using them. For example, there is a provision for cooperation with engineering companies. There is no way that a modern cost-efficient, high-end manufacturing can be established without sound engineering. There is another big problem, i.e. the way the federal laws and regulations regulate tenders. The state has to buy from the winner low-quality cheap products, i.e. machine tools without after-sales service and supplies of respective spare parts tools and accessories”. Additionally, Yury Borisov also pointed out that under the law 50% of machine tools should be manufactured in Russia. However, these machine tools are most often the “last century hardware”. The issues of pricing have long been left unresolved. However, neither the Ministry of Defense, nor the MIC see any reason for being blamed for this, “because the issues are first of all supposed to be addressed through laws and regulations. It’s another matter that the Ministry of Defense and the MIC should intensify their lobbying efforts and participate more actively in drafting well-defined laws and regulations which promote rather than constrain the scientific and industrial development”.

Therefore, it derives from the available data on the MIC organizational and technical development that the resources allocated to the MIC have been spent ineffectively. This can be explained by an excessive monopolistic power prevailing at top levels of the MIC’s manufacturing hierarchy, who tend to set prices, terms, and even WME basic characteristics. Another reason is that it is mostly principal enterprises of the MIC that managed to survive at hard times, whereas manufacturers of components degraded, failed to upgrade and compete with foreign suppliers, and many of them went bust.

Under the circumstances, some contracts cannot be concluded, because there is nobody who would wish to do it. The situation cannot be saved by simply raising the amount of allocations.

¹ Military arts – a competent conversation. The materials of a roundtable which was held in RIANOVOSTI late in 2013.

“The state has to pay a dear price to purchase military equipment”, said Deputy Chairman of the Military Industrial Committee under the Russian Government (MICRG) O. Bochkarev. “This area is riddled heavily with corruption and nontransparent procurement schemes, added Polyakov I., Chairman of the MIC Industrial Branch of Delovaya Rossiya, an all-Russian public organization. Light fingered contractors tend to make sure the price is low, obtain 80% upfront, and then disappear. Furthermore, those enterprises which have failed to complete an order may easily receive a new one”.

Manufacturing WME for the Russian Armed Forces and for export

The beginning of 2013 held promise. The Russian Navy flag was hoisted on January 10, 2013 on the K-535 Yuri Dolgoruky Borei-class ballistic missile submarine (SSBN). Another underwater nuclear cruiser Aleksander Nevsky came into operation at the end of the same year as part of the same project. It should be noted, however, that this had no effect whatsoever on the Russia’s strategic deterrence potential, because the notorious Bulava submarine-launched ballistic missile designed for such cruisers failed to be put into service , i.e. Russia’s nuclear submarines (NS) remain disarmed for the time being. It is only the previously tried and tested strategic deterrence assets that can save the situation . As a reminder, the national strategic posture is meticulously measured on the basis of the treaty signed between the United States and the Russian Federation and, as equally important, the results are published.

The level of compliance with the arrangements on the reduction of strategic offensive arms (SOA) as of 1.09.2013 is shown in *Table 28*.

Table 28

Data on the SOA quantities in the Russian Federation and the United States

SOA title	Threshold values under the treaty	U.S.A. on actual basis	Russia on actual basis
Deployed launchers: intercontinental ballistic missiles (ICBM), submarine-launched ballistic missiles (SLBM), and heavy bombardment aircrafts (HBAC)	700	809	473
Deployed launching and non-deployed launching platforms for the same classes of launchers	800	1,015	894
Warheads on deployed launchers	1,550	1,688	1,400

Data source: Bureau of Arms Control. Verification and Compliance. Washington, DC: US Department of State, 2013.

It derives from the data presented in *Table 28* that Russia is currently behind the United States by number of strategic offensive assets which may be recognized within the deterrence concept. As a reminder, the United States (besides the assets recognized under the treaty) has incomparably more sea-launched cruise missiles than the Russian Federation does, as well as other assets which weren’t covered by the international treaties. This implies that the balance of powers has been becoming increasingly asymmetric and approaching the deterrence threshold limit. Measuring the military assets of NATO members, such as Great Britain and France, as well as deployment of ABM systems leads even closer to the threshold limit. True, Russia cannot ignore the imbalance. Neither can it ignore the fact that China and a few other states have similar nuclear weapons (NW). This is why the situation with Russia’s strategic deterrence assets was and still remains the principal, essential indicator of Russia’s military potential and national security.

Besides the NW, the potential of conventional high-precision guided weapons has been growing year after year in many countries. Russia is still behind in the development of such

weapons and therefore compelled to retain its tactical NW stocks and delivery systems, as well as the possibility of their use in regional conflicts.

Providing information support to the strategic deterrence assets is equally important. Russia has been making efforts to resolve this issue. In 2013, three new prefabricated radar stations (RS) for missile warning system (MWS) were built (in the Krasnoyarsk Territory, the Altai Territory, and the Orenburg Region) to control ballistic, space-based, and aerodynamic targets¹.

Regarding the development of conventional combat weapons, the possibility and practicability of purchasing such weapons from other countries moved to a new phase in 2013. On the one hand, it would be wrong to resolve the issue behind-the-scenes, as A. Serdyukov wanted to do. On the other hand, Russian top executives cannot resolve it through a comprehensive analysis of all factors and controversial arguments. To date, at least the order on the supply of French made Mistral-class multirole surface warships to the Russia's Naval Force has been still in force so far.

There is neither need nor technical capacity to list in this review the achievements or, *a contraria*, failures in the development of all conventional arms. Even if we restrict ourselves to, for example, analysis of the results achieved in the development of military air vehicles and weapons based on the latest scientific attainments. Moreover, they are traditionally linked to the development of the civil aviation and in this context can serve as illustrative example for the given MIC objectives in general.

However, it should be kept in mind that the development of modern military air vehicles has been evolving into manufacturing of unmanned drones (UMDs), with information and cybernetic means of control playing the principal role. Russia is behind other countries in this. It cannot be but mentioned that Rb 3bn worth of long-time mission air vehicles are under development in the Russian Federation at such companies as Transas (St. Petersburg) and OKB Sokol (Kazan). A heavier UMD is being development at the Sukhoi Aviation Holding Company (JSC)². However, like in the previous years, not a single UMD has come to operation yet to pay off the costs of their development.

It is the United States and Israel that are leading in the development and combat employment of UMDs. However, Russia is facing difficulties in terms of military and technical cooperation with these countries. The United States has been steering away from dealing with Russia's enterprises, while Israel is cooperating with certain reservations. There is an interesting information though: ADCOM Systems, an Emirati company, is ready to deliver to the Russian Ministry of Defense its United 40 drone for test. According to some data, engineers from the Kharkiv Aviation Institute were actively engaged in the development of this drone. Indeed, competitive relationships move in a mysterious way. If the Russian military need such a vehicle, it might seem more rational for the Russian party to deal directly with the Kharkiv specialists. However, relationships between Russia and Ukraine and, consequently, between their MICs are so controversial that politics leaves no room for practicality.

After all, failures to fulfill the seemingly key objective with a huge financing are the indication of that the SAP-2020 has failed to be up to a "perfectly estimated to the last kopek" program, as the Russian President described it once, and, therefore, not subject to any cuts. The defense industry simply has no enough time to spend the money which can be invested. This is why the SAP-2020 began to see gradual cuts in 2013. Russia's Finance Minister Siluanov A.

¹ Voenno-promyshlenny weekly journal No 2 dated 16-22.01.2013

² *Nikolsky A.* A wide product line of drones // *Vedomosti*. 2013. December 5, 2013 (No. 226).

gave comments on this said at the end of the first half of the year, saying that “the Ministry of Finance and the Ministry of Defense have agreed to carry over a part of the state armaments program expenditures”, and explained that it refers to carrying over to 2017–2018 a part of the budget expenditures scheduled for allocation for these purposes in 2014–2016. At the same time, he pointed out that “the program’s deadline, 2020, remains unchanged”¹ as well as the total amount of budget expenditures does.

Some experts considered this a reason to infer that “Russia’s Arms Forces and the MIC are facing the main issue of deep disorganization and generally overflowing incompetence of the administrative body, rather than lack of financing, and even embezzlement. The Bulava missile has been tested for nine month, half of the missile flights were abortive. However, no one could say that this ill-fated project lacks financing”²?

Nonetheless, annual accounting is still expressed in rubles showing neither success nor visible failures.

WME operation issues

The idea to switch to EPC contracts with industrial enterprises³ in order to ensure WME “life cycle” was a Defense Minister’s new proposal entailing serious effects. He stated that this is supposed to “minimize risks of failure to fulfill government defense order (GDO) assignments”. A new scheme of WME repair and disposal was for the first time suggested by the Defense Minister at a meeting with President Putin late in a January 2013. Explaining the Defense Minister’s decision, his Deputy Y. Borisov said that every device designed for the Armed Forces will be subject to support services from the release date until the disposal stage. He also assured that “such contracts have been approved by manufacturers”. Technically, it will look like service support of the products supplied “to the Russian Armed Forces effective this year ... through sub-agreements on the provision of support services, repair, and disposal throughout the device’s entire service life”. An agreement on the provision of support services to Yury Dolgoruky Borei-class ballistic missile nuclear submarine, as well as frontline, military airlift, and strategic airplanes is expected to be signed among first such contracts.

There is nothing yet to say, or worth saying, about whether or not this innovation is useful. Indeed, it should be useful for industrial enterprises, because they will have profitable orders. However, it may not be the case for military units and, broadly speaking, the national defense. It cannot be ruled out that the effect might be inverse when special conditions are required for the deployment, as it was the case with unfounded introduction of outsourcing to meet the Army needs. Furthermore, no one can quarantine an “eternal life” to manufacturing enterprises. And it will appear then that we have given up our historically proven experience in training WME maintenance personnel in regular line units, while no field experts will be available at all or such experts will not be able to reach the battlefield or operate in harsh natural conditions, for example, subarctic environment.

Developing new WME and engineering personnel training

Advanced Research Foundation (ARF) was established in order to ensure dynamic development of groundbreaking but risk-bearing technologies for the sake of national defense and security. However, it might take longer for the Foundation to be formed, and there is little

¹ mn.ru/society/20130614/348897295.ht...

² <http://www.kommersant.ru/doc/2282902>

³ http://ria.ru/defense_safety/20130213/922638863.html

hope of turning it into something that resembles successful foreign analogues, in particular, the U.S. Defense Advanced Research Projects Agency (DARPA)¹.

The issue of manufacturing personnel training hasn't been put aside. Top managers of industrial enterprises and holdings report on the issue to the Military-Industrial Commission under the Government of the Russian Federation. Overall, as it was repeatedly stated, the SAP-2020 is synchronized with the MIC Development Federal Targeted Program (FTP) whose public contractor-coordinator is the Ministry of Industry and Trade of the Russian Federation (Minpromtorg). As part of the foregoing FTP enterprises reequip their production facilities to be able to manufacture new models. However, it will take long until these works can be fully linked with the works performed as part of the projects promised by, for example, ROSNANO or Skolkovo. One cannot but hope that all these entities and foundations will approve themselves at next stages of the SAP-2020, most importantly, as part of the new SAP-2025.

The issue hasn't been forgotten, but the way it has been addressed rises some questions. To bring up questions and look for solutions, let's cite a few lines from Dmitry Rogozin's report in the State Duma: "the focus should be placed on manufacturing brand new models of arms, military and special equipment, rather than deep modernization of the models which can be manufactured by our industry. This requires new materials, new knowledge, new solutions. In other words, a new program must be innovative. This is a challenge. The huge scientific and technological potential which our fathers and grandfathers created has been exhausted. We have no new solutions left for materialization"².

Indeed, there is no room for argument here. Nevertheless, applied research and development was financed on an annual basis. Furthermore, having succeeded in the ARF establishment, Military Industrial Committee Chairman Dmitry Rogozin suddenly points to other high-ranking officials, a new need "to upgrade the status of chief designer, a person who assumes full liability for looking for new solutions".

Where new components, let alone "dual purpose" ones, may come from if the principal generator of latest scientific and technical ideas is not the ARF but a team of competing chief designers aimed at creating WME end products rather than components, materials, technologies is? Doesn't such a concept contradict the U.S. DARPA concept and, consequently, that of the ARF?

Transferring military technologies to civil industries

Like in the case with the previous task, no serious results were achieved here in 2013. What happened led to more questions than answers. For example, Russian Rostec Corporation, a military-oriented company, announced late in 2013 its unexpected "contribution" to the production of a new dual-screen smart phone called YotaPhone. YotaPhone's main application properties imply that it is designed to enhance reliability of transmitting vital information (if the main screen battery runs out of power) to the consumer.

Nothing was said about using such devices for military purpose, although the need to equip the Armed Forces with modern reliable and user-friendly means of communication and spatiotemporal provision, for example, GLONASS, has long been discussed. However, such a presentation of the potential dual-use feature of the gadget is unlikely to cover its production

¹ Tsymbal V.I. How the adoption of the ARF Act may influence the Russian economy? // *Ekonomicheskoye Razvitiye Rossii*. 2013. No. 2. pp. 48–52. What Russia's Economy Should Expect from the Adoption of the Federal Law on the Advanced Research Foundation? http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2271110;

² *Rogozin D.* Reviving the defense industry. 2013. December 18, 2013 (No. 49).

costs and enhance its military relevance. The rest of the new device is rather discouraging, because it was previously announced that nothing but the dual screen was designed in Russia. The gadget that was demonstrated to the Prime Minister turned out to be assembled of imported components in Singapore, not Russia.

Sukhoi Superjet-100 (SSJ-100), a passenger air jet, is much more serious illustration of dual (civil and military) use of the products manufactured by the MIC. However, it may hardly be considered a success. Since the original plan on sales in external markets didn't work out, the WME customers had to buy these air jets despite the strict home airfield quality requirements, which is untypical of military aviation.

Most importantly, both military and civil aviation are facing equally pessimistic prospects in Russia, as convincingly evidenced by Russia's high-profile test pilot M. Tolboev who named the main reason for the failures and even tragedies (in particular, the civil aircraft crash in the city of Kazan) that took place: "This is corruption in its pure form"¹. He also predicted a pessimistic outcome.

Innovation "products" are often fictitious. Let's take a look at the results of a few audits. "Having spent huge public allocations, the Minpromtorg of Russia has failed to fulfill the objectives of developing and introducing cutting edge technologies and enhancing the research and intellectual potential of the aircraft and shipbuilding industries. The obtained results have been found to be insufficient to cover the costs of the inventions which the state has made no use of"². Furthermore, as specified in the cited publication, "facts of the Ministry paying for unperformed R&D and overpricing have been revealed. Preliminary estimates show that the damage may reach about Rb 1bn".

Overall, summing up the 2013 results concerning all the issues of equipment of the Armed Forces, the Defense Minister expressed satisfaction: "in 2013, R&D (research and development) GDOs were fulfilled 96%, and it cannot but satisfy. WMSE (weaponry, military and special equipment) have been purchased 93%, WMSE repair and service support – 91%. This is a serious achievement". "We have seen a substantial growth in arms supplies: we have received 1.7 times more equipment than in 2012. The number of reclamations will be the same or less than in 2012. We have to work on further reducing the number of reclamations, and a lot depends on the Ministry of Defense Acceptance Committee"³, added the Minister.

¹ Magomet Tolboev: Bribes lead to plane crashes // Pravda.ru. 2013. December 3, 2013.

² Nikolayev S., Safronov I. Prosecutors in defense // Kommersant. 2014. January 29, 2014.

³ http://ria.ru/defense_safety/20140114/989097405.html.