

Oleksii V. Makariuk<sup>1</sup>, Leonid G. Melnyk<sup>2</sup>, Bogdan A. Moskalenko<sup>3</sup>  
**INVESTMENT POTENTIAL OF THE DEFENCE INDUSTRIAL  
COMPLEX ENTERPRISES IN UKRAINE \***

*The article presents the analysis of the investment potential of the defence industrial complex of Ukraine. The authors investigated the peculiarities of defence enterprises access to external investment resources. The article suggests the ways how to improve the management of DIC of Ukraine in order to increase the competitiveness of these enterprises.*

*Keywords: investment potential; investment market; defence industrial complex of Ukraine.*

*JEL classification: E22; E29; E44; E60; F21.*

Олексій В. Макарюк, Леонід Г. Мельник, Богдан А. Москаленко  
**ІНВЕСТИЦІЙНИЙ ПОТЕНЦІАЛ ПІДПРИЄМСТВ ОБОРОННО-  
ПРОМИСЛОВОГО КОМПЛЕКСУ УКРАЇНИ**

*У статті представлено аналіз інвестиційного потенціалу оборонно-промислового комплексу України. Досліджено особливості доступу підприємств ОПК до зовнішніх інвестиційних ресурсів. Запропоновано шляхи удосконалення управління ОПК України з метою підвищення конкурентоспроможності його підприємств.*

*Ключові слова: інвестиційний потенціал; інвестиційний ринок; ОПК України.*

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Алексей В. Макарюк, Леонид Г. Мельник, Богдан А. Москаленко  
**ИНВЕСТИЦИОННЫЙ ПОТЕНЦИАЛ ПРЕДПРИЯТИЙ  
ОБОРОННО-ПРОМЫШЛЕННОГО КОМПЛЕКСА УКРАИНЫ**

*В статье представлен анализ инвестиционного потенциала оборонно-промышленного комплекса Украины. Исследованы особенности доступа предприятий ОПК к внешним инвестиционным ресурсам. Предложены пути усовершенствования управления ОПК Украины с целью повышения конкурентоспособности его предприятий.*

*Ключевые слова: инвестиционный потенциал; инвестиционный рынок; ОПК Украины.*

**Introduction.** In the consequence of the 2014 events Ukraine is constantly under the threat of full-scale war. Taking into consideration the nature of contemporary wars and complicated international political situation this country should reckon only on its own resources in case of any aggression. In this situation together with soldiers' patriotism and professionalism the level of their assurance with most advanced kinds of weapons, machinery and accoutrements becomes foremost. Domestic defence industrial sector assured armies participation in armed conflicts of the second half of the XXth century at the highest level. And even now the majority of African, Asian countries create active demand for the products of Ukraine defence industrial sector (DIC) orienting on such its competitive advantages as low prices and easy maintenance of products. Herewith, as anti-terrorist operation showed, Ukraine's DIC was not adapted for this century war: production technologies for precision weapons, modern means of both manpower and machinery protection and

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<sup>1</sup> Sumy State University, Ukraine.

<sup>2</sup> Sumy State University, Ukraine.

<sup>3</sup> Sumy State University, Ukraine.

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secure and reliable information transmission means, reconnaissance asset etc are absent. Therefore, the development of effective model of qualitative and urgent reforming and modernization of DIC is of not only scientific and economic interest but is essential for the very independence of Ukraine.

**Literature review.** To the problems of enterprises investment potential and improvement of the defence-industrial complex are dedicated the works of many national (Behma, 2000; Kharchenko, 2004; Vasylieva et al., 2009) and foreign (Golstein and Razin, 2006; Klandt et al., 2001; Lim, 2001; Lehmann, 1999) scientists.

It must be noted that despite a great number of theoretical and practical research on enterprise investment potential and DIC problems in Ukraine, there is little contemporary research on the investment potential problems of DIC enterprises in Ukraine. Taking into consideration the necessity of urgent reforms regarding military and economic safety it is reasonable to mention great importance of researches in this field.

**Research objectives** of this paper are: to analyze the features of investment potential of defence enterprises in Ukraine, to explore the features of defence enterprises access to external investment resources and to suggest the ways to reform the management of DIC Ukraine in order to improve the competitiveness of their products at global markets.

**Key research findings.** Modernization of any subject of economic relations is impossible without attracting investment resources. Investments should be understood not only as a complex of financial assets and material values but also as information and other immaterial resources allowing reaching market benefits. Competitive growth, new market achievement, production expansion, structural improvement of management and other processes launched with investments were integrated by us into the concept of "market benefit".

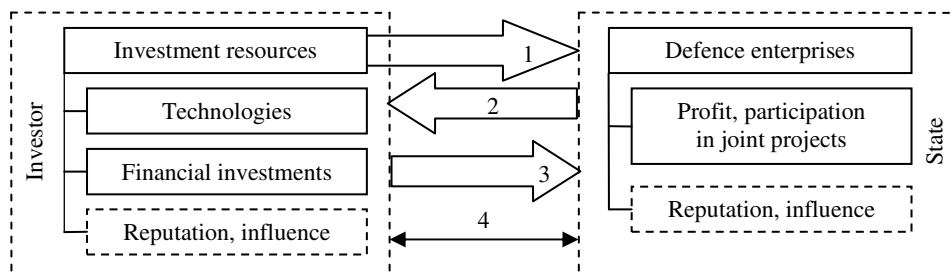
Summarizing the recent researches of leading scientists in the field of investment market and investment potential (Golstein and Razin, 2006; Klandt et al., 2001; Lim, 2001; Lehmann, 1999; Vasylieva et al., 2009) the category of "enterprise's investment potential" is determined as a complex of enterprise's investment resources and the ability to attract additional investments.

The process of investment resource attraction to DIC is affected by the factors of investment potential formation and use. These factors are divided into internal and external ones (Table 1).

*Table 1. Factors of investment potential of defence enterprises, authors'*

Internal	External
1.The actual resource potential of an enterprise. 2.Position at a market: sales, competitors, reputation. 3.Dynamics of enterprise's financial indicators. 4.Internal policy and regulatory framework to attract outside resources, including from abroad.	1.Market indicators of household savings in the economy. 2.Inflation expectations. 3.The level of trust of investment resources holders to an investment object. 4.Regulatory framework of investment activity in the country. 5.Risks of the country or the region.

The most effective way to assure enterprise's investment potential growth is to create of favorable conditions for its functioning and development. Thus, having objective capabilities for development with minimum barriers from the outside environment the natural evolutionary development of investment potential will start. Even ineffective managers of enterprises can change, if assured that there are market conditions and equality of opportunities. Functioning of the "investor – investment object" system within the defence-industrial sector has its peculiarities (Figure 1).



- 1 – the first investment into defence enterprises;
- 2 – returns on investment and the results of such cooperation for investors;
- 3 – next investments in joint projects, given the experience;
- 4 – permanent impact on the reputation of partners of each other.

*Figure 1. The relationship "investee – investor" in of the defence industry of Ukraine, authors'*

Conditions for investment resources attracting to DIC enterprises means first of all the compensation of expected risks. Thus, studying DIC investment potential it is necessary to analyze its resource base and capabilities for profit covering also risks.

Native DIC is mostly represented by the state concern "Ukroboronprom" that consists of the following units: enterprises of armoured vehicles, artillery armament, automobile, engineering and special equipment; shipbuilding and marine facilities plants; aircraft engineering and aircraft repair plants; plants of radio detecting and ranging, radio connection and air defence systems; precision weapons and ammunition plants; special exporters.

According to the data of Stockholm International Peace Research Institute (SIPRI) the level of international supplies of basic kinds of armament during 2009–2013 was 14% higher than in 2004–2008 (Stockholm International Peace Research Institute, 2014).

The biggest exporters during the period of 2009–2013 were the USA, Russia, Germany, China and France, and the biggest importers were India, China, Pakistan, the United Arab Emirates (UAE) and Saudi Arabia (Centre for Analysis of World Arms Trade, 2014).

During the last 5 years the "Ukroboronprom" enterprises increased greatly their export rates. Ukraine comes eighth among the exporters of basic kinds of weapons having 3% share of the world export volumes. The greatest clients of domestic DIC enterprises are China (21%), Pakistan (8%) and Russia (7%) (Centre for Analysis of World Arms Trade, 2014).

At the meeting of the National Security Council 06.16.2014 cooperation with Russia in the military-technical sphere was prohibited. This decision is fully understandable politically and morally but it requires also economic feasibility grounding.

The Decree of the President of Ukraine "On the decision of the National Security and Defence Council of Ukraine" as of August 28, 2014 "On Urgent Measures to Protect Ukraine and strengthening its defence capability" canceled exports to Russia, related primarily to space and defence industries.

Let's analyze the features of this embargo. Military cooperation with Russia was in such main areas:

- "Motor Sich" supplied engines for Russian helicopters and airplanes;
- "Pivdenmash" produced and serviced strategic missile R-36M2 and launch vehicles "Zenith";
- "Antonov" participated in the joint program with Russia on design and construction of AN-70 and also supplying components to several other types of aircraft;
- "Zorya" – "Mashproekt" produced gas turbines for Russian warships.

According to the Center for Army, Conversion and Disarmament Studies (CACDS) the loss of export to Russia in 2014 was about 300 mln USD (Center for Army, Conversion and Disarmament, 2014).

This digit is not critical for the general trade volume between Ukraine and Russia. In 2012–2013 defence industry products accounted for only 0.7% of the total exports from Ukraine to Russia (State Statistic Service of Ukraine).

*Table 2. Exports from Ukraine to Russia in monthly dynamics in 2014, mln USD, compiled by the authors basing on (State Statistic Service of Ukraine)*

Data	Months											
	01/14	02/14	03/14	04/14	05/14	06/14	07/14	08/14	09/14	10/14	11/14	12/14
Total exports from Ukraine	5004.8	5110.5	5124.5	5771.7	4906.9	4796.9	5203.8	5198.8	5164.7	5582.0	5567.1	5889.0
Exports to Russia	1108.3	1221.0	1269.6	1335.2	1366.8	1293.6	1348.7	1197.4	1275.4	1294.2	1197.8	1169.2

As we can see from Table 1, prohibition on DIC exports had almost no effect on the exports volume in general, and to Russia in particular. It should be noted that defence is a science-intensive industry requiring the participation of many enterprises from other related industries. Thus when we talk about these 0.7% of the total merchandise exports from Ukraine to Russia, which is about 300 mln USD, we should understand that these are mostly high-tech components for Russian defence industry, the lack of which can stop a large the number of enterprises on that side of the border.

Meanwhile, when arms exports Ukraine is 3% of the world export or more than 1 bln USD (SIPRI), the internal defence order for war for 2015 hit the record of 6 bln UAH, or about 0.25 bln USD (according to the exchange rate at the beginning of the year) (National Security and Defence Council of Ukraine).

Thus, the Ministry of Defence of Ukraine can buy only about 25% products of its own national defence industry. Thus, it is believed that during the current war we must withdraw from the export of defence products, streamlining it to the front.

Thesis 1: When purchasing more products of DIC the Armed Forces of Ukraine will become more combat-ready. Refutation: under "hybrid" war, many weapons cannot be used because they will turn into ballast during maneuvers of our troops and in target for enemy artillery. In addition, this increase in the expenditure budget of the Ministry of Defence could be otherwise used for social protection of servicemen, their families or other purposes.

Thesis 2: Our DIC is one of the best in the world and everything for war we can prepare ourselves. Refutation: Ukrainian DIC does not have that great potential, in precision weapons and new protective equipment we lag far behind the world's leading developments. We should concentrate on those types of weapons, which Ukraine produces most efficiently and/or for which there are better conditions. Other weapons should be imported, while still not forgetting about research and investment in this sector in order to create conditions for the replacement of such imports in the future.

Thesis 3: Ukrainian DIC should stop producing what is currently not needed by the national Armed Forces and all resources should be spent on the production of high-precision weapons, protective equipment and everything needed at the front. Refutation: It is hard to switch from one production to the entirely new one – it takes time for the conversion of assets, personnel training, investment in capital assets and technology. At the same time the loss production volumes and assortment will be instantaneous.

It should be noted that the increase in existing production volumes (along with increased efficiency) allows reducing the share of fixed costs in the cost structure of production. Thus, Ukrainian enterprises have an opportunity for more flexible pricing to conquer new markets and increase customer loyalty. The increase of the defence sector production is like any export orientation, growing volume of foreign currency earnings, improving the trade balance for the country, creating new jobs, stimulating the development of the related industries.

Obviously, in the near future Ukraine must get rid of any dependence on Russia and not only in the DIC field. At the same time this should be done carefully and gradually, with minimal losses for domestic enterprises, searching at the same time for new markets and investments. In order to implement this objective we need to be clear about the potential of the defence industry of Ukraine, which we now try to explore.

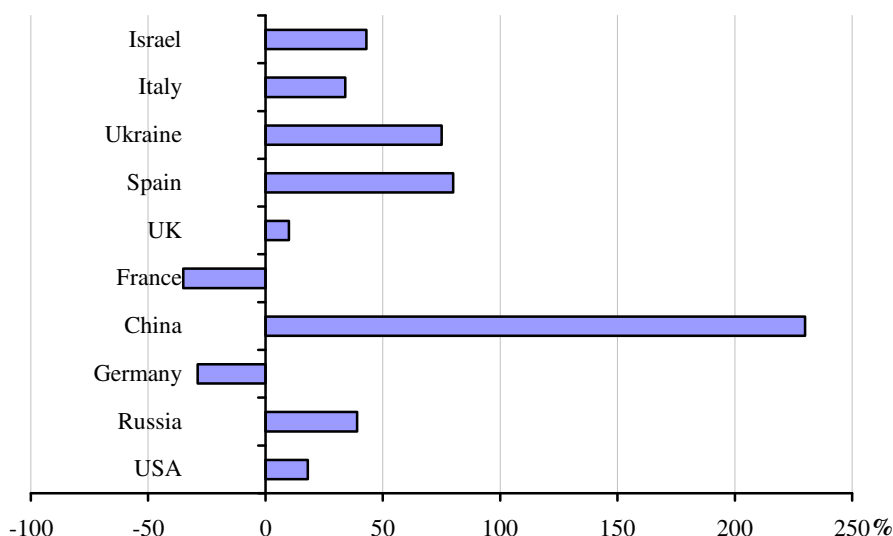
Ukraine feels severe competition in the most sensible for it export sphere – tank supply. Basic competitors of Ukraine in 2013 were France, Germany, Russia, Great Britain, the USA which took part in the biggest tenders for armoured vehicles supply.

Rocket and space spheres hold a special place in the structure of national DIC. Products designed at "Pivdenne" and produced at "Pivdenmash" launch rocket "Zenit" and "Cyclone" are one of the most perfect in their range rockets.

National engine building also has great investment potential. "Motor-Sich" engines are used on planes in over 50 countries of the world.

Significant factor in the analysis of Ukrainian DIC potential is the fact that many countries has great number of weapons and machinery of former Soviet production in

the inventory of defence and law enforcement agencies. Available manpower, production and technical resources open great potential possibilities for Ukraine to carry out the repair of such weapons and military equipment being competitive in terms of price-quality balance and also having capabilities for export of spare parts and other accessories.



**Figure 2. Changes in exports of the largest exporters of major weapons during 2009–2013 in comparison with the period of 2004–2008, %, compiled by the authors basing on (Centre for Analysis of World Arms Trade, 2014)**

Cooperation as to military equipment modernization allows saving greatly in rearmament of own defence and law enforcement agencies for importing countries. Herewith, one should take into consideration that this market is actively developing in other Eastern European countries and Russia.

Today armament and military equipment markets, where Ukraine can come into or is already present, are very limited. Importers, which have limited access to modern armament and military equipment because of certain reasons, are of significant interest for national exporters. China, Pakistan, Iran, some countries of Africa belongs at such countries. Taking advantage of the situation, Ukraine could penetrate into the armament market of Pakistan and Iran. However, there are a lot of competitors on such markets. For example, taking advantage of refusal of the USA and Russia to export planes of the fourth generation to Pakistan, France signed a contract for delivery of own-produced fighter planes to Pakistan. Turkey can be referred to the market, interesting for national producers, which is under sanctions of the USA and partially EU for modern armament delivery due to Kurdish problem.

Pakistan and India represent perspective markets of weapon and modern technologies for the defence industrial sector of Ukraine. Strained relationships between these countries constantly require military goods and services.

Considering the cooperation in military sphere with India and Pakistan, it is necessary to take into account, that previously only Russia, the USA and China did

armament and equipment delivery to the countries of this region, pursuing their own political interests. Herewith, Russia mainly delivered armament to India and the USA and China – to Pakistan. But politically unstable Pakistan often has difficulties with armament import from the USA, influenced greatly by public opinion. Concluded by Ukraine contract for tanks delivery to Pakistan is a result of successful new market development. Ukrainian exporters won competition with Russia and some EU countries (France, the United Kingdom, Germany).

Thus, the international armament market is perspective for Ukrainian enterprises, especially its "budget-friendly" segment. Problems of coming into/developing of this market for national producers are:

- moral and physical demolition of basic funds and technologies, remained from the Soviet times;
- imperfect organizational infrastructure, which integrates the stages of production, partner search, coming into market and marketing;
- high level of corruption and politicization in the administration the defence industrial sector;
- absence of foreign capital, conditioned by the strategic status of such enterprises;
- difficulties with coming to the biggest armament markets, conditioned by weak international status of Ukraine and the influence of political lobby on the part of the biggest exporters (the USA, Russia, China, EU etc.).

Most problems can be solved by additional financial resources, aimed at modernization, marketing and effective administration in market conditions. So, the fundamental issue of the national defence sector is the absence of necessary investments.

All-Ukrainian investment market problem is that near 60% of all investments to real sector are personal enterprises' assets. Such investment sources include authorized share capital, depreciation allowances, profit and special funds formed at its cost, reserve funds etc.

Thus, during the last years the defence industrial sector of Ukraine provided own development and survival at the sole expense of exports, however armament export has its disadvantages and peculiarities:

- governmental orders of the countries for rearmament of own law enforcement agencies are of one-time character, that is conditioned by the armament long-term service time (especially the Soviet) and significant financial expenses on it, so "budget-friendly" customers rarely rearm army;
- armament movement at the international market is very flexible to political situation in the world, because it is intensely controlled by international organizations and interested countries in order to fight terrorism or under the pretext of such fight, that will have equal consequences for countries-exporters;
- competition, foreign investments, free market are impossible considering the state monopoly and severe control over production process and weapons trade.

Machine-building in general and within the defence-industrial complex of Ukraine in particular are in great dependence on Russian Federation. It concerns not only the availability of share capital of this country, but even more the sales market: material- and energy-intensive products of local machine-building can compete even

on specific markets, where there is no big necessity to save on materials, but capacity and safety of product are of big importance.

For historical reasons, Russia market is the biggest consumer of local machine-building, but in the result of 2014 events Ukrainian enterprises must in the shortest term re-orient at other, already divided markets. This process will not be painless: a wave of bankruptcy, the rise of unemployment and the rest of accompanying socio-economic problems will take place if there is no state support.

State budget exhausted by the load of military actions cannot become the moving force of renewal of country's economy. So the factor of foreign investments comes to the fore. It concerns not only financial resources, but also technologies, access to new markets. Thus, the last factor is of special significance: a big foreign company, having got confidence in doing business in Ukraine, transfers here a part of its production (cheap human resources and raw materials promote this). Thus, this big foreign company gives part of its market, in essence, to Ukrainian production.

Obviously, under the conditions of military actions on the territory of the country, foreign investors will not hurry to invest, so the top-priority problem, even in comparison with economic ones, stands before the government of Ukraine – providing safety and integrity of the country.

Ukrainian defence industrial complex, as well as the local gas transmission network, are strategic objects and the issue of their privatization has acute political and socioeconomic implications. The Verkhovna Rada of Ukraine has adopted the Law, according to which two separate companies are planned to be created at participation of American and European partners, which will serve subterranean gas storages and the system itself (Law of Ukraine "On amending to some laws of Ukraine on reforming of control system of unified gas transmission network", 14.08.2014, #4116-a).

Ukrainian state invites public tenders to engage investors for modernization and operation of gas transmission network. Such investors, according to the law, can only be the companies from the EU or USA, certified in a proper way.

Also the added paragraph says that while holding a tender a company which is the resident of the EU or USA is obliged to reveal all information on the structure of its property and show all beneficiaries and owners.

Consequences and results of this process of reforming Ukrainian strategic objects should be considered also during the future reforming of the defence industrial complex.

The character of "Ukroboronprom" activities, unlike gas transmission network is more flexible: assortment of products, services, bigger clients' basis, bigger mobile facilities etc. That is why there are more possibilities as to handleability for the sake of improvement and administration effectiveness, so the model of joint administration of the state and foreign investors of the facilities of "Ukroboronprom" is more promising. Besides, at the conditions of access for private investors to administration, the risks of losing or disclosure of secret military technologies arise or other "dirty" market methods of competitors' elimination, from which the defensive capacity of Ukraine might suffer. Joint administration of gas transmission network does not bear such risks in itself, so it is reasonable to demark in time the processes of such reforming of strategic objects.



Reserves of scientific-research potential of "Pivdenmash", "Pivdenne", "Motor-Sich", "Antonov" and other flagmans of domestic defence industrial complex without proper financial support and investments lose competition at global markets, and Ukrainian enterprises have only to export products of Soviet times to Sudan or Tajikistan. Such extensive development starts the chain reaction leading to underpayment of currency export receipts and ending with breakdown of defence industrial complex and disruption of defence capabilities of the country in the whole.

**Conclusions and directions for further research.** Short-term problems of enterprises survival within defence industrial complex are solved to some extent by export buildup of armored vehicles, missiles and missile launchers, planes. However, conquering new markets of hi-tech arms is impossible without investments in research. Considering current Ukrainian problems, we can conclude that the problem of defence-industrial complex modernization and improving export potential of branch enterprises has to be solved by the controlled access for foreign investors to the management of "Ukroboronprom" concern, that is possible only under proper legal support and solving the problems of abuse and corruption in the related power authorities.

Development of cooperation mechanism for foreign investors and the state in production, administration and distribution of income and risks is also a promising direction for further investigations. The problem of such mechanism is simultaneous compliance of state interests and investors motivation to participate for further income maximization and minimization of risks and negative effects.

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