Kyiv National University of Trade and Economics

The Department of World Economy

FINAL QUALIFYING PAPER (PROJECT)

on the topic:

« IMPROVING THE INTERNATIONAL COMPETITIVENESS OF UKRAINIAN SPECIAL EXPORTERS »

(based on the data of SFTE "SpetsTechnoExport", Kyiv)

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CONTENT

LIST OF SYMBOLS

STE – SpetsTechnoExport

SFTE – state foreign-trade enterprise

UAH – Ukrainian hryvnia

USD – United States dollar

GDP – gross domestic product

MCW – major conventional weapons

SIPRI – Stockholm International Peace Research Institute

TIV – trend indicator value

R&D – research and development

PESTEL – political, economical, social, technological, environmental, legal

UAV – unmanned aerial vehicle

WME – weapons and military equipment

PMS – products of military service

MTC – military-technical cooperation

INTRODUCTION

The relevance of the final qualification work (project). The situation formed at the beginning of the XXI century in the world arms market, is characterized by a qualitative change in strategy and motivation for the promotion of weapons and military equipment from different countries and regions. At the same time, the production of arms and military equipment becomes one of the most high-tech sectors of the industry. In today's global economy, new trends in the global arms market are emerging, characterized by the changing geopolitical and geo-economic foundations of the transformation of the global arms and military equipment market, the emergence of new arms markets, the creation of large international corporations and associations, the expansion of forms of industrial integration. Taking into consideration these tendencies and stress escalation of the Russian-occupying troops, it becomes relevant for Ukraine to study the problems of developing the export potential of the military-industrial complex and to form some strategic decisions on improving the competitiveness of the special arms exporters, taking into consideration the competitive advantages in foreign markets.

Analysis of the level of development of the topic. Problems of the modern development of the arms market and the state of the Ukrainian defense-industrial complex are attracting the attention of many domestic and foreign scientists, such as S.S. Goreslavskiy, A.A. Bochurov, A.H. Kurbanov, A.N. Lytvynenko, O.P. Kutovyi, Y.V. Malyshenko, S.V. Chumachenko, A.V. Ftalchuk and others.

At the same time, despite the multidimensional nature of the works on studying the peculiarities of Ukraine's participation in the global market of military equipment, the problems of increasing the competitiveness of the Ukrainian military-industrial complex in the context of special arms exporters require more detailed elaboration.

The purpose of the final qualification work is to develop practical recommendations for increasing the competitiveness of SFTE “SpetsTechnoExport”. *Achieving this goal led to the following main objectives:*

- detailed analysis of the international market of arms and military equipment and determine the place of Ukrainian defense industry in the market;
- examining of the financial and economic activities of SFTE “SpetsTechnoExport” and detection of the cause and effect relationships;
- diagnostics of the external environment of the operation of SFTE "SpetsTechnoExport" with an assessment of the impact of each group of factors on the enterprise and the defense industry as a whole;
- assessment of the level of competitiveness of SFTE “SpetsTechnoExport” in the international arms market;
- development of a set of measures to improve the competitiveness of SFTE “SpetsTechnoExport”;
- forecast assessment of the effectiveness of the proposed activities for SFTE “SpetsTechnoExport”.

The object of the final qualification work (project) is the process of improving the international competitiveness of Ukrainian special exporters in the environment of international economic activity.

The subject of the research is the methodological principles of the operation of special exporters in the environment of international economic activity in the context of increasing competitiveness.

Research methods. The fundamental works of leading domestic and foreign scientists on the problem formed the theoretical and methodological basis of the study. In the process of solving these tasks author applied methods of analysis and synthesis, induction and deduction, methods of systematic generalization and comparison, statistical methods, institutional method and methods of economic modeling. The

information base of the study was the legal and statistical materials of the Cabinet of Ministers of Ukraine, Ministry of Economic Development and Trade of Ukraine, Stockholm Institute for Peace Studies, National Bank of Ukraine, WTO, UNCTAD, World Bank, UN and others.

The scientific novelty of the results of the final qualification work (project). The scientific novelty of the work is to systematize approaches to improving the competitiveness of special exporters in the conditions of aggravation of competition.

Information on testing the results of the study. The results of this research were represented in a collection of scientific articles by students of full-time education in the specialization “International economics”.

PART 1

RESEARCH OF CURRENT STATE OF SFTE «SPETSTECHNOEXPORT»

1.1. Analysis of the international arms market

In the total volume of world trade market of weapons and military equipment occupies a very modest place. However, the significance of this global market is determined not only by exports of weapons and military equipment and protecting profits. The arms trade is an important foreign policy tool that contributes to the promotion of the interests of the exporting country worldwide and the corresponding impact on the political course of the countries-importers.

The current global arms market is one of the most complex sectors of the world economy. The rivalry of individual countries and groups is very fierce here: the struggle is fought not only for individual profits, but also for the military-technical advantage, the long-lasting attachment of the buyer to its technological complex. Purchased ships, planes, air defense systems, tanks, artillery complexes serve as a rule for many years, but over time they need upgrading and repair. Therefore, connections in this area are too profitable for the manufacturer, since the first agreement entails the necessary regular contracts [1].

The arms trade is subject to more extensive controls than the trade in most other goods, producer countries use several instruments to regulate the arms trade. During the last five years, efforts to ensure that the global arms trade proceeds responsibly advanced, most notably with the 2013 conclusion of the Arms Trade Treaty. Now with 92 states-parties, the treaty requires the establishment of national export control systems, as well as assessments of whether exported arms would “contribute to or undermine peace and security” or could be used to commit or facilitate serious violations of international humanitarian or human rights law, acts of terrorism, or transnational organized crime [2].

The parameters of the global arms market directly reflect the situation in the world. Rising military tensions naturally lead to militarization, increased production and trade in arms and other military products. Therefore, in this paper, we examine international trade flows of major conventional weapons (MCW) using data provided by the Stockholm International Peace Research Institute (SIPRI). MCW include armored vehicles, aircrafts, naval vessels, and SIPRI has collected all international arms transfers from 1950 to 2018 in a comprehensive database. The volume is measured in so-called TIV, shorthand for trend-indicator value(s), and represents the value of exported military resources, based on production costs [3, p. 2].

Fueled by armed conflicts in the Middle East and tensions in Asia, global trade in major conventional weapons systems has reached its highest level since the end of the Cold War (see fig.1.1), according to a report from the Stockholm International Peace Research Institute (SIPRI). The volume of international transfers of major weapons rose by 6,56 per cent between 2010-2014 and 2015-2018 (see fig.1.1), the increase marks a continuation of the steady upward trend that began in the early 2000s.

Figure 1.1 The trend in international transfers of MCW, m. TIV [4]

SIPRI has identified 67 countries as exporters of major arms in 2014-2018. The five largest arms suppliers in 2014-2018 were the United States, Russia, France, Germany and China, and they accounted for 76 per cent of the total global volume of exports of major weapons (see fig.1.2). Since 1950 the USA and Russia (or the Soviet Union before 1992) have consistently been by far the largest suppliers and, together with West European suppliers, have historically dominated the top 10 list of suppliers.

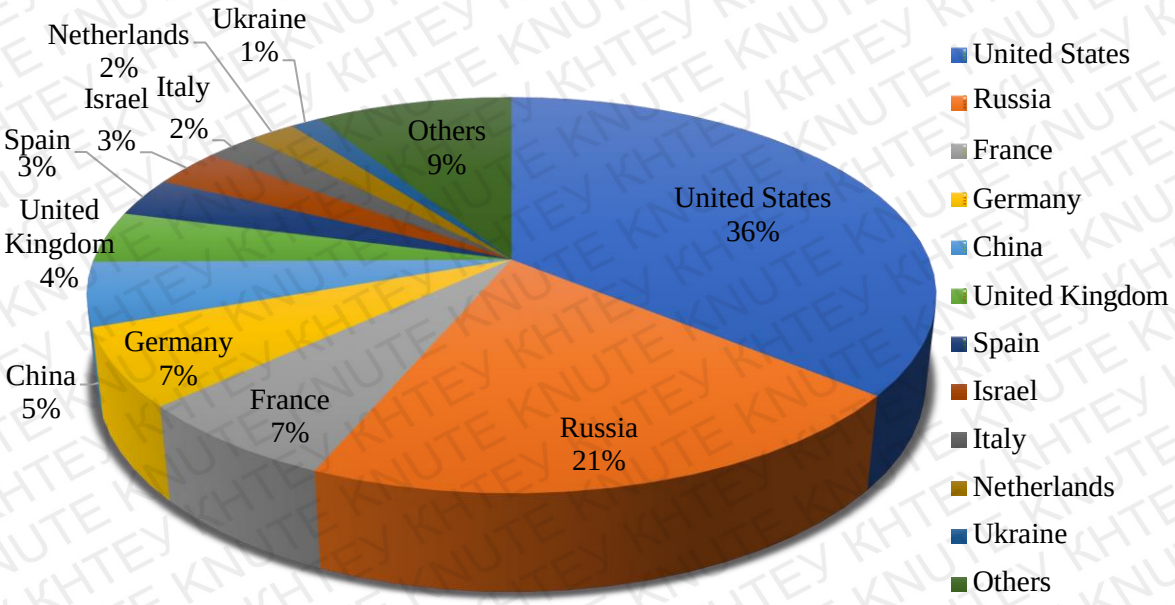


Figure.1.2. Global share of MCW exports by the 10 largest exporters, 2014-2018, [3]

Slowly but surely, Ukraine continues to give up its position as an arms exporter. The country that was recently among the top five arms suppliers in the world is not even in the top ten today.

According to the published on the eve of the SIPRI report "Trends in the global arms trade, 2018", over the past five years, the export share of Ukrainian arms in the world market has fallen by 47%. According to the researchers, from 2009 to 2014 it was 2.7%, but in the period from 2014 to 2018, it decreased almost twice - to 1.3%.

Thus, our country has dropped from eighth to 12th position in the ranking of the world's largest arms suppliers according to the institute. There are several reasons for

this sharp decline, but the most important are two. First is the wasteful handling of the military-technical legacy that Ukraine inherited after the collapse of the USSR, and as a result, the total depletion of its reserves. Second is the Russian aggression. The fact is that for many years Russia was considered the main importer of Ukrainian weapons, but after the annexation of Crimea in 2014, these trade relations were gradually terminated at the initiative of Kyiv [5].

Despite the armed conflict, Ukraine did not enter the rating of the largest buyers of weapons according to SIPRI. According to researchers, in 2014-2018, arms imports to Ukraine were limited and accounted less then 1% from the total volume (fig.1.3).

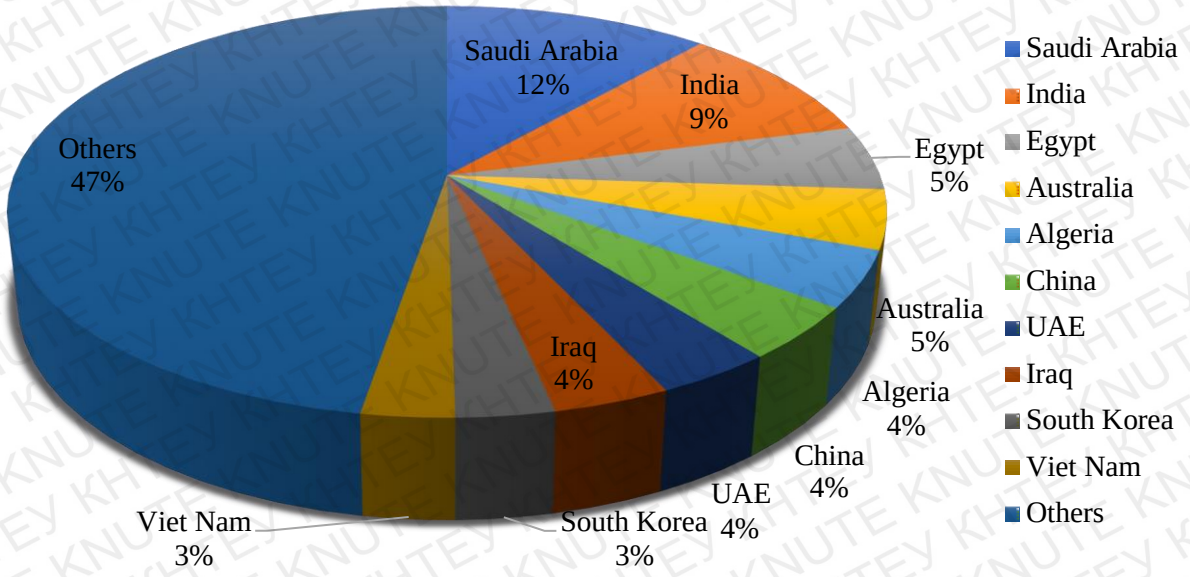


Figure 1.3 Global share of MCW imports by the 10 largest importers, 2014-2018, [3]

SIPRI has identified 155 countries as importers of major arms in 2014-2018. The top five arms importers – Saudi Arabia, India, Egypt, Australia and Algeria – accounted for 35 per cent of total arms imports in 2014-2018 (see fig.1.3). Among them, Saudi Arabia and India were in the top five importers in both 2009-2013 and 2014-2018. At the regional level, Asia and Oceania accounted for 40 per cent of imports in 2014-2018, followed by the Middle East, Europe, Africa and the Americas.

Analyzing the structure of world arms transfers by the weapon category (see fig.1.4), we can conclude that aviation technology is the first place among all categories of arms and military equipment in terms of actual deliveries by a large margin.

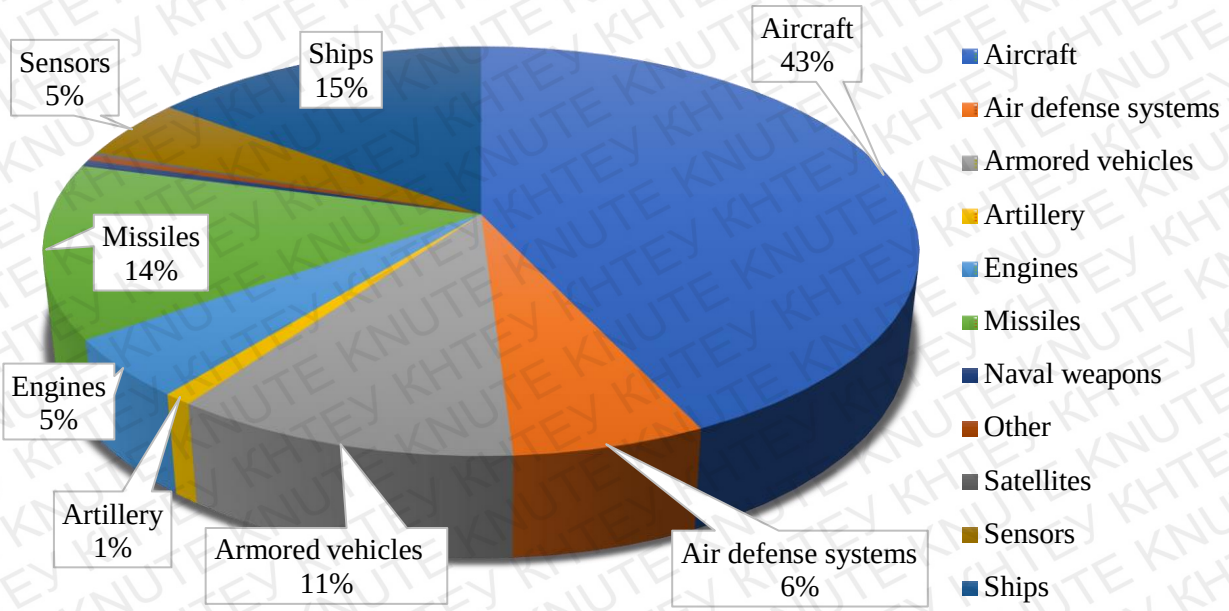


Figure 1.4 Global share of MCW transfers by the weapon category, 2014-2018, [3]

Lockheed Martin, Boeing and other top U.S. weapons makers said they had seen accelerating demand for U.S. weapons at the biennial air show despite escalating trade tensions between the United States and Europe. Many European nations have increased military spending since Russia's annexation of the Crimea region of Ukraine in 2014, bolstering missile defenses and upgrading or replacing ageing fighter jet fleets [6].

Between 2014 and 2018, SIPRI scientists estimated global aviation supplies at 62879 m. TIVs, accounting for 43% of all arms and military equipment sales. For the 2014-2018 period, the share of aviation equipment sales in the structure of world arms and military supplies gradually increased (ranging from a minimum of 11311 m. TIVs in 2014 to a maximum of 14071 m. TIVs in 2017).

World military expenditure is estimated to have been $1822 billion in 2018 (see appendix A), accounting for 2.1 % of world gross domestic product (GDP) or $239 per person [7]. At $648 billion, the United States remained the world's largest

spender, accounting for 3.2 per cent of its GDP. China, the world's second largest spender, allocated an estimated $250 billion to its military in 2018, an increase of 9.7 per cent compared with 2017, having stable increasing dynamics since 2014. Saudi Arabia became the third largest spender in 2018 with permanently largest share of military expenditure in GDP. India, where spending rose by 3 per cent in 2018 to $66.5 billion, was the fourth largest spender. By contrast, Russia's military spending since 2014 fell by 27 per cent to $61.4 billion, making it the fifth largest spender in 2017.

According to new data (see appendix B), in 2017 the sales of weapons and military services by the largest military-industrial companies included in the top 100 SIPRI totaled $ 398.2 billion. It is also worth noting, that the growth in sales of weapons and military services in the top 100 has been observed for the third year in a row. As stated in the Institute's report, in this particular case, this happened due to an increase in the cost of arms purchases by the United States and the Russian Federation [8]. Regarding Ukraine, our country, like Canada, Poland, Australia and Singapore, is represented in the ranking by only one company – the state concern "UkrOboronProm". Compared to 2016, its arms sales volumes fell by 11% to $ 1 billion. Thus, Ukraine in the top 100 largest arms manufacturers in the world fell two places - from 79th to 81st place.

Based on the results of a macro analysis of the global arms trade market, one can see a stable and growing dynamics in the export and import of arms over the past decade, provoked by several military conflicts, as well as the dominance of monopolistic countries such as the United States and Russia, which largely justifies the structural distribution of armaments by categories. As for the place of Ukraine in the world arena, it is worth noting that after an active Soviet-era arms sales policy, our country (represented by the state concern "UkrOboronProm") fell to several positions due to the lack of technological capabilities of exported weapons.

1.2. Analysis of the financial and economic activities of SFTE “SpetsTechnoExport”

SFTE ”SpetsTechnoExport” is a state self-supporting foreign trade enterprise, established by the Government of Ukraine in 1998, the main activity of which is export-import relations on the world market of products and services of military and dual-use purpose. The company makes a profit through commercial activities in the field of export and import of production and services of military and special purpose, results of intellectual activity, scientific production and technology, including military, special and double-purpose subject to export control, increased efficiency and the development of export potential of Ukrainian enterprises and the expansion of international cooperation in military-technical sphere.

Examining the dynamics of indicators of financial activity of the enterprise, we can conclude, that over the last 5 years of its functioning there has been a sharp growth of financial indicators from 2014 to 2015 (see fig.1.5).

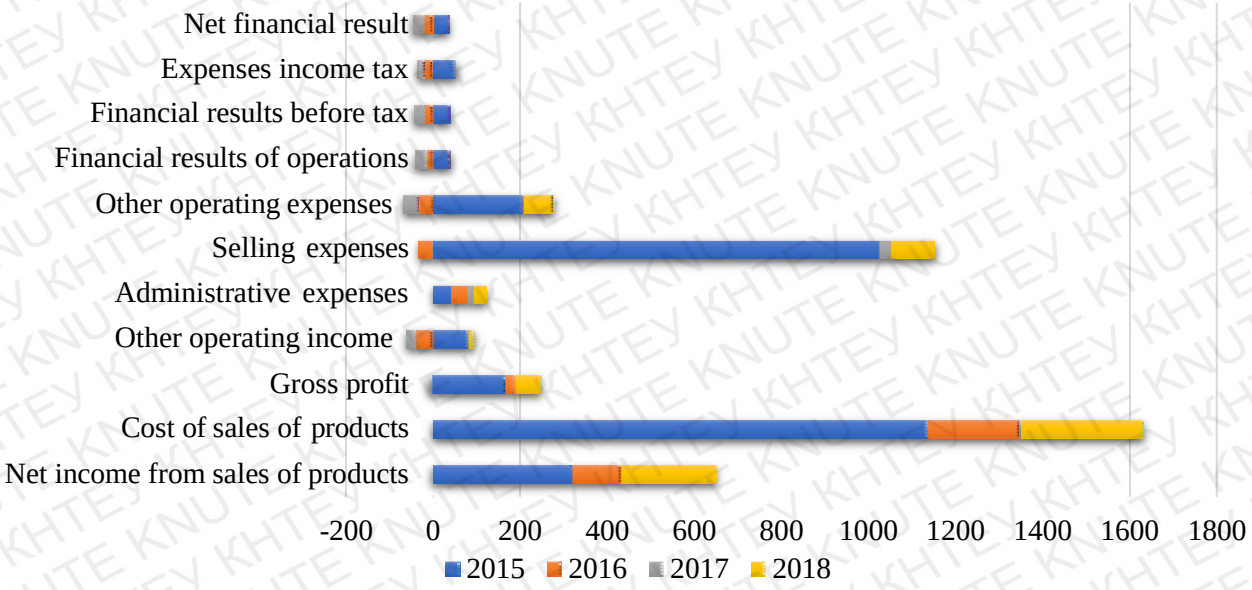


Figure 1.5. Percentage change in rate of increase, by type of financial activity, %, [composed by the author based on the appendix F]

The beginning of Russian aggression and anti-terrorist operations in eastern Ukraine can justify the situation above, since STE, which previously specialized mainly in export operations, received several import orders from the defense departments of Ukraine. When STE concludes an export transaction under a commission agreement, an accountant credits the commission fee of the enterprise to the "Net income from sales of products" section, and according to the commission agreement, the ownership of the goods does not transfer to STE. The situation is different in the case of import government orders, because an accountant credits the entire cost of the import contract to the "Cost of sales of products" section, and the cost of the whole government contract – to the "Net income from sales of products". Due to these features of the financial accounting of the enterprise, we can justify a sharp increase in indicators from 2014 to 2015 and their subsequent fluctuations.

Despite the rapid increase in the "Net income from sales of products" section in the enterprise in 2014, a completely opposite trend we observe in the "Net financial result" section. Starting in 2016, the growth rate of net profit had a negative value as we can see in the figure above. There are several reasons for this negative trend: a parallel increase in cost of sales and selling expenses, increased competition in view of manufacturers obtaining the right to sell military goods. Also a very important factor of the negative impact is that the company’s commission for the export contracts is usually 6.5–9%, while for government orders it is only 1-3%, which can also be offset by exchange rate differences, which entails a significant reduction in the "Net financial result" section.

In the structure of assets of the company for the last 5 years, current assets occupy the main part (their value did not fall below 92% in the structure of assets), which include export commission contracts, that bring the company the bulk of income. Also current assets contain government contracts of the defense ministries of Ukraine and "situational" contracts of purchase and sale.

Considering the dynamics of fixed assets of the enterprise (see fig.1.6), in 2017, their significant increase by + 1531.8% was noticeable, which is justified by obtaining the ownership of the building worth 19 million UAH, where STE office is located.

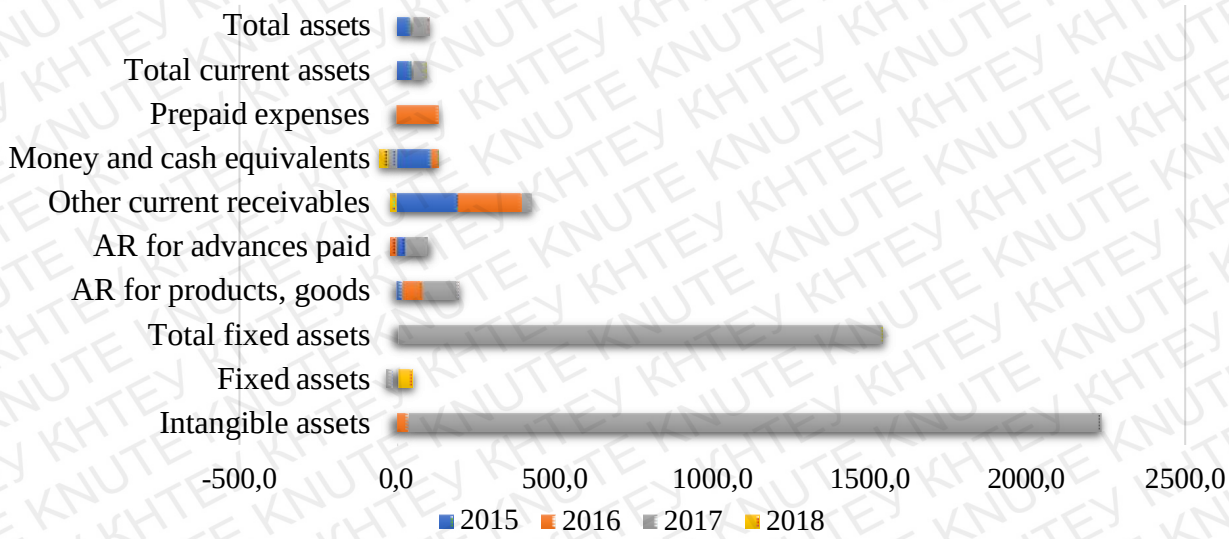


Figure 1.6. Percentage change in rate of increase, by type of assets, %,
[composed by the author based on the appendix C]

As for the dynamics of current assets, we can observe a sharp increase in all of their constituent balance sheets starting in 2014, associated with an increase in the activity of the enterprise in connection with incoming government orders and a slowdown in growth in 2018.

The company had no long-term liabilities for the study period. The bulk of the current liabilities of the enterprise we can explain with the balance sheet item “Current accounts payable for advances received”, because with the advent of plentiful government orders, the need for long-term import contracts has appeared. This means that the Ministry of Defense ordered and paid for such a volume of goods, the production of which took 3-9 months, and accordingly all this time until the counterparty sent the goods to Ukraine, the amount of STE debt to the Ministry of Defense of Ukraine as the amount of the contract was recorded to the accounts payable item.

As for the dynamics of the company's liabilities (see fig.1.7), one should note here that the amount of additional capital increased every year by the amount of retained earnings, which, with stable values of registered capital, was the main factor in the dynamics of the total capital of STE.

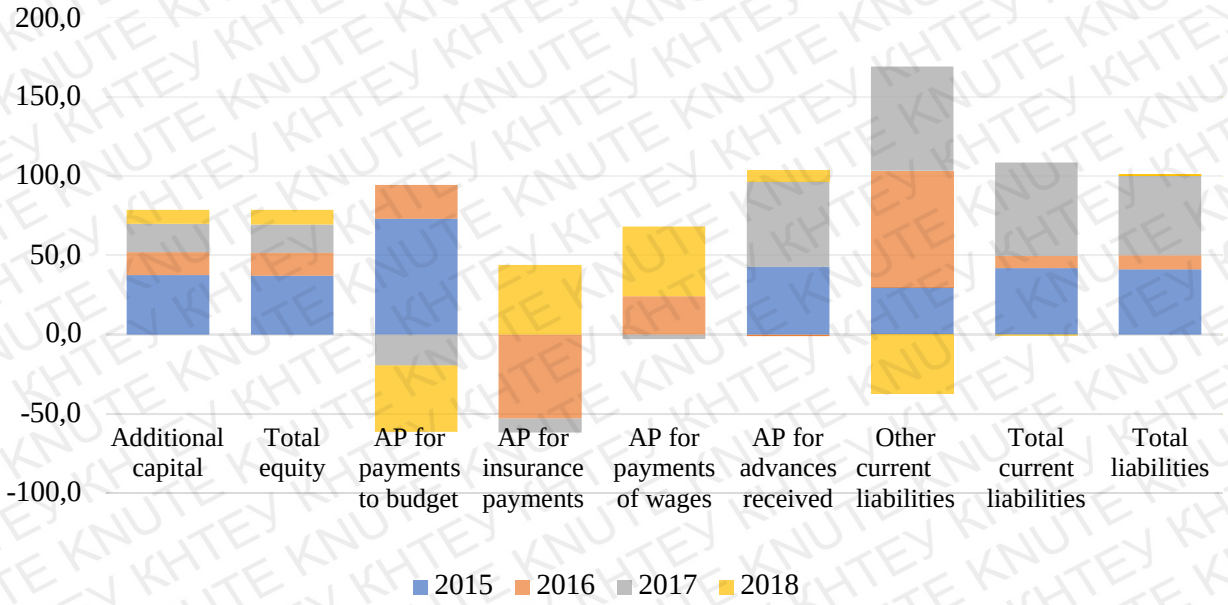


Figure 1.7. Percentage change in the rate of increase, by type of liabilities, %, [composed by the author based on the appendix D]

To assess the degree of liquidity, an entity uses different relative liquidity ratios that differ in liquidity, that they use to cover their liabilities. The absolute liquidity ratio from 2014 to 2016 was within the normative values (> 0.2) (see tab.1.2) and had an upward trend, which changed in 2017 due to the increase in the short-term liabilities of the enterprise. The values of other liquidity coefficients (current and quick ratios) are within the normative values. This indicates the balance of the capital structure, the ability of the entity to meet its short-term liabilities, that is, to repay the existing debts on time and to properly arrange the cash and cashless payments of the enterprise. As for the indicators of financial stability of the enterprise, their values during the period under review were normal, and there were no sharp fluctuations, except debt ratio and financial leverage ratio, the values of which tended to increase.

Table 1.1

The dynamics of liquidity and financial stability ratios

Index	31.12. 2014	31.12. 2015	The absolute deviation 2015/2014	31.12. 2016	The absolute deviation 2016/2015	31.12. 2017	The absolute deviation 2017/2016	31.12. 2018	The absolute deviation 2018/2017
Liquidity / Debt Ratios									
Cash Ratio	0,215	0,314	+0,099	0,362	+0,048	0,160	-0,202	0,118	-0,042
Current Ratio	1,256	1,253	-0,003	1,269	+0,017	1,114	-0,155	1,127	+0,013
Quick Ratio	1,229	1,252	+0,023	1,261	+0,009	1,108	-0,153	1,120	+0,012
Financial Stability Ratios									
Solvency Ratio	0,271	0,262	-0,009	0,278	+0,016	0,206	-0,072	0,226	+0,020
Financial Leverage	3,693	3,821	+0,128	3,595	-0,227	4,851	+1,257	4,431	-0,420
Equity Ratio	0,213	0,207	-0,006	0,218	+0,010	0,171	-0,047	0,184	+0,013
Debt Ratio	0,787	0,793	+0,006	0,782	-0,010	0,829	+0,047	0,816	-0,013

Source: calculated and composed by the author based on SFTE “SpetsTechnoExport” data

The values and dynamics of these two coefficients are directly related to the liabilities of the enterprise, which during 2014-2018 tended to increase, and this occurred under the influence of several factors. Considering that the amount of government orders has increased, both the assets of the company at the end of the reporting period and liabilities in the form of payables to the Ministry of Defense of Ukraine have increased. Another factor is the fact that the number of complaints under contracts increases every year, while the export volumes decrease due to the low quality of factory fixed assets that are not updated.

In the case of STE a high asset turnover in 2014-2018 is considered good, since it implies that company quickly collects receivables and heavily utilizes fixed assets. This implies a minimal need for invested funds, and therefore a high return on investment.

Table 1.2

The dynamics of turnover and profitability ratios

Index	2015	2016	The absolute deviation	2017	The absolute deviation	2018	The absolute deviation
Turnover ratios							
Asset turnover	0,268	0,464	+0,196	0,342	-0,123	0,903	+0,561
Inventory turnover	14,051	87,873	+73,821	42,720	-45,152	138,031	+95,311
AR turnover	4,296	6,310	+2,013	3,105	-3,205	7,801	+4,697
AP turnover	16,290	59,181	+42,890	58,885	-0,296	32,529	-26,355
Cash conversion cycle	88,525	55,832	-32,693	119,913	+64,082	38,211	-81,702
Days inventory outstanding	110,930	61,999	-48,931	126,112	+64,113	49,431	-76,680
Profitability ratios							
ROE	37,052	24,133	-12,919	15,320	-8,813	13,083	-2,237
ROA	7,772	5,134	-2,638	2,905	-2,230	2,323	-0,582
ROI	114,059	44,754	-69,306	39,656	-5,098	16,604	-23,051
Net profit margin	28,969	11,056	-17,913	8,499	-2,556	2,573	-5,926

Source: calculated and composed by the author based on SFTE “SpetsTechnoExport” data

With regard to profitability ratios, it is worth noting that since 2014, they had an inherent dynamics of decline, which is directly related to the dynamics of the company's net profit, which during 2014-2018 decreased due to fluctuations in foreign exchange earnings and an increase in government orders for defense departments of Ukraine.

After analyzing the financial and economic condition of the enterprise, we were able to identify the main difficulties in the activities of the enterprise and the factors that provoke them. Apparently, the beginning of Russian aggression entailed irreversible changes in the structure of STE work, namely the termination of cooperation with the Russian Federation, the reduction in the range of armaments that the government allows to export, the increase in state import contracts, the commission of a special exporter for which is minimal, which partly undermines the activities of the enterprise due to a significant decrease in profits.

Conclusions to part 1

In this part, a study of the current state of SFTE "SpetsTechnoExport" in the context of the global environment of the enterprise and the internal "ecosystem" of the enterprise concerning the financial and economic state was conducted. In the course of the international arms market research over the past 5 years, several of its major trends and patterns have been identified. Total global militarization due to the intensification of military conflicts and the development of critical technologies are actively stimulating the growth of arms trade, which is well evident in the scale of the last decade. The dominant positions of the main arms exporters were distributed between the US and Russia, France, Germany and China (but the US prevails in this Top-5). In terms of imports, Saudi Arabia, India and Egypt remain leaders, due to the difficult geopolitical situation of these countries.

Speaking about Ukraine's place in the international arena, it should be noted that after the depletion of Soviet-made military equipment and the beginning of military aggression, Ukraine has emerged from the top ten arms exporters, which in turn has led to some changes in the operation of SFTE "SpetsTechnoExport".

Examining the dynamics of financial and economic indicators of enterprise activity over the last 5 years, we can notice a significant increase in indicators since 2014, which is due to the significant activation of defense orders from the military departments of Ukraine. Despite the increase in the total income of the enterprise, the dynamics of profit is the opposite due to the minimal commission of the special exporter commission for state defense orders, compared to the commission for export contracts. This situation is critical for the enterprise and creates the preconditions for strengthening the competitive position of the enterprise in the international market of arms and military equipment.

PART 2
RESEARCH OF THE COMPETITIVENESS OF SFTE «SPETSTECHNOEXPORT» ON THE INTERNATIONAL ARMS MARKET

2.1. Diagnostics of the external environment of the activity of SFTE "SpecTechnoExport"

The global arms market is a specific sector of international relations with a variety of factors which determine the parameters of this market. Political instability, rising military tensions, armed conflicts all naturally lead to militarization and increased demand for weapons. For the analysis of external factors of influence of SFTE “SpetsTechnoExport” we will use widely recognized PESTEL analysis [9, p. 1].

In the research process, we will determine the degree of influence of factors on the company and assess the likelihood of a change or occurrence of the factor. After we select all factors that can influence the sales and profits of the company, it is necessary to assess the strength of the influence of each factor. The strength of the influence of the factor is evaluated on a scale of 1 to 3. The probability of changes is evaluated on a 5-point scale, where 1 means the minimum probability of a change in the environmental factor, and 5 means the maximum probability of a change. Impact assessment is evaluated:

$$Impact\ assesment = \frac{Factor\ influence \times Factor\ change}{\Sigma Factor\ influence} \quad (2.1)$$

The first group of factors (see tab.2.1), having the total impact of 0,63 shows us that political factors often have an impact on arms trading companies and how they do business. Due to the deep connection between government and defense industry, such factors like political stability and government policy have a special impact on company’s functioning, especially in the time of Russian aggression which affected the east of Ukraine, where strategically important enterprises located.

Table 2.1

Impact of political factors on the competitiveness of SFTE "SpetsTechnoExport"

Factor name	Impact description	Factor influence	Probability of factor change	Impact assessment
Government policy	The reduction in national weapons programs in countries - leading producers of arms leads to an increase in quantity of production, oriented on export; applying the differentiated approach by the Ukrainian government and setting a standard for economic entities involved in the defense sector, at a minimum of 30 % [10].	2	3	0,14
Political stability	In order for the army to respond to the existing threats of Russian aggression, the Ukrainian defense industry is faced with clear tasks: first, to arrange the quality repair and upgrade of existing weapons; secondly, to develop, commercially produce innovative military and dual-use products.	3	4	0,28
Corruption	The surge in military spending has held back efforts to defeat the corruption and self-dealing that many see as Ukraine's most dangerous enemy. The International Monetary Fund and the European Union have suspended assistance money totaling more than $5 billion [11].	1	2	0,05
Foreign trade policy	Rigid and opaque regulation prevents domestic entrepreneurs from competing in international tenders, forcing private producers to transfer capacity and taxes to neighboring countries of the European Union [12].	2	2	0,09
Trade restrictions	After the annexation of Crimea in April 2014, Kyiv stopped military-technical cooperation with Moscow, and in August of that year, the decree of Petro Poroshenko "On measures to improve the state military-technical policy" suspended the supply of military and dual-use products to Russia [13].	3	1	0,07

Source: calculated and composed by the author.

Table 2.2 shows us how strongly economic factors with the total impact of 0,6 influence the enterprise. Rising military tensions naturally lead to militarization, higher military spending and increased demand for weapons.

Table 2.2

Impact of economic factors on the competitiveness of SFTE "SpetsTechnoExport"

Factor name	Impact description	Factor influence	Probability of factor change	Impact assessment
Government spending on the Ukrainian defense industry	Increased significantly in hryvnia terms after the aggression in the east, and this can be seen in the increase in the portfolio of state defense orders of STE.	2	3	0,14
Market demand	According to experts, the global arms market has a steady upward trend. According to SIPRI experts, the amount of weapons and military equipment sold worldwide in 2013–2017 increased by 10% compared to 2010–2012. This was due to the activity of a group of developed countries interested in increasing sales of their military products on the world market.	3	4	0,28
Inflation	Inflation is usually an important factor in the functioning of any enterprise, and STE is not an exception, because in its commercial offers to foreign customers, it sets prices in the light of inflation, which makes them less competitive in the international arena.	2	2	0,09
Exchange rates	Considering the specificity of activity of the enterprise, namely, foreign trade operations, payment for which is made in foreign currency, while tracking performance trends it is necessary to remember about how the exchange rate (absolute deviation of income and expenses from exchange differences) affects of monetary balance sheet items.	2	2	0,09

Source: calculated and composed by the author

Assessing the impact of social factors (see tab.2.3) on both the defense industry and STE we should remember that despite the insignificant weight of factors in relation to the company's activities, in the long run they have a global and comprehensive influence in the context of the world arms trade.

Table 2.3

Impact of social factors on the competitiveness of SFTE "SpetsTechnoExport"

Factor name	Impact description	Factor influence	Probability of factor change	Impact assessment
Globalization of the arms industry	While wholly indigenous armaments production may be on the decline multinational arms production through collaboration on individual weapons systems and increasingly via interfirm linkages across the international arms industry appears actually to be expanding [14].	1	4	0,09
Radically negative perception of arms trade by the society	Civil society organizations preventing the unchecked spread of conventional arms, enhancing transparency and facilitating accountability thereby reducing misperceptions, building trust and creating fair competition between arms trading companies, excluding illegal shadow players in the market [15].	1	5	0,12
Limited access to qualified human resources	The use of more sophisticated technologies and understanding of new globalization business strategies leads to the limited availability of prepared and qualified staff and an increase in the cost of pay, investment in training.	1	3	0,07

Source: calculated and composed by the author

Technological factors with total impact of 0,7 are proving the importance of company competitiveness progressiveness and necessary requirement of new technologies usage in production of weapons.

Table 2.4

Impact of technological factors on the competitiveness of SFTE "SpetsTechnoExport"

Factor name	Impact description	Factor influence	Probability of factor change	Impact assessment
Technology incentives & level of innovation	Military organizations begin exploiting a wide variety of new technologies through organizational adaptation and doctrinal innovation. The result will be fundamental change in the way wars are fought.	2	4	0,19

Continuation of table 2.4

Automation	Development of drones and armed robots which may be able to select, identify, and destroy targets, which is a necessary requirement for an arms trading company to stay competent on the market [16].	2	4	0,19
R&D activity	Once weapon systems research skills are accumulated via long-term stable policy support then the maturing of such a R&D skills enhances the potential benefits due to shorter development times, reduced costs and improved performance [17].	2	5	0,23
Technological change	While specialized defense hardware is remaining, dual-use equipment is becoming increasingly central to the performance of advanced military forces. As a result, it is more difficult to track the implications of trade in defense-related hardware simply by monitoring transfers of major weapons systems.	1	4	0,09

Source: calculated and composed by the author

The influence of environmental factors on the enterprise can be traced through their influence on the committees - Ukrainian weapons manufacturing plants, which are directly affected by these factors.

Table 2.5

Impact of environmental factors on the competitiveness of SFTE "SpetsTechnoExport"

Factor name	Impact description	Factor influence	Probability of factor change	Impact assessment
Increasing scarcity of raw materials	Increasing global demand for unprocessed and processed minerals, metals and other semi-finished materials, the volatility in the prices of some of them, as well as the market distortions imposed by some producing countries have highlighted the importance of raw materials to the countries' economies and society [18].	1	3	0,09
Doing business as an ethical and sustainable company	Companies involved in manufacturing and trading arms find themselves in a particularly difficult position in trying to reach a balance between the two points: the desire to generate profits from selling the core products of the business and the ethical reasons for not promoting them.	1	4	0,09

Continuation of table 2.5

Carbon footprint targets set by governments	Over the past last decade the developing countries have reduced its fossil fuel consumption through actions that include using renewable energy, weatherizing buildings and reducing aircraft idling time on runways, which required much of investments in the industry [19].	1	4	0,09

Source: calculated and composed by the author

Given the specifics of the defense sector, it is worth noting the strong influence of legal factors, since the world community is extremely concerned about the issue of regulation and control of arms trade.

Table 2.6

Impact of legal factors on the competitiveness of SFTE "SpetsTechnoExport"

Factor name	Impact description	Factor influence	Probability of factor change	Impact assessment
Domestic law regulation	States regulate the arms trading of corporations and persons within their jurisdiction by regulating the manufacture, export, import, transportation, insurance, financing, ownership, stockpiling and use of weapons.	3	2	0,14
Requirements imposed on exporters	End-user requirements, accompanied by controls on re-exporting and requirements on States to ensure good receipt of the export at its destination, through the use of verified delivery.	2	3	0,14
Regional agreements of a legally binding nature	Reflect the commitment of States to reducing the risk that arms transfers contribute to an international crime. These instruments are often accompanied by guidance for domestic regulation and statements of best practice.	2	3	0,14
Arms embargoes	Create obligations not only for State Parties, who are often required to ensure that breaches of the terms of the embargo do not take place on their territory, but also for the nationals of those States, who may be prevented from engaging in arms trading with the target, regardless of whether this occurs on the territory of a State part [20, p. 10].	3	3	0,21

Source: calculated and composed by the author

PESTEL analysis provided us with the opportunity to identify, from all factors, two main groups with the strongest influence on the enterprise and industry as a whole - political and technological, as arms trade is an important foreign policy tool and is fully regulated by the state, and is also extremely subject to any technological changes in the world.

2.2. Assessment of the level of competitiveness of SFTE "SpetsTechnoExport" in the international market.

In 2018, SpetsTechnoExport continued to increase the volume of military-technical cooperation with the longtime partner countries of Ukraine, as well as intensified its work in new markets.

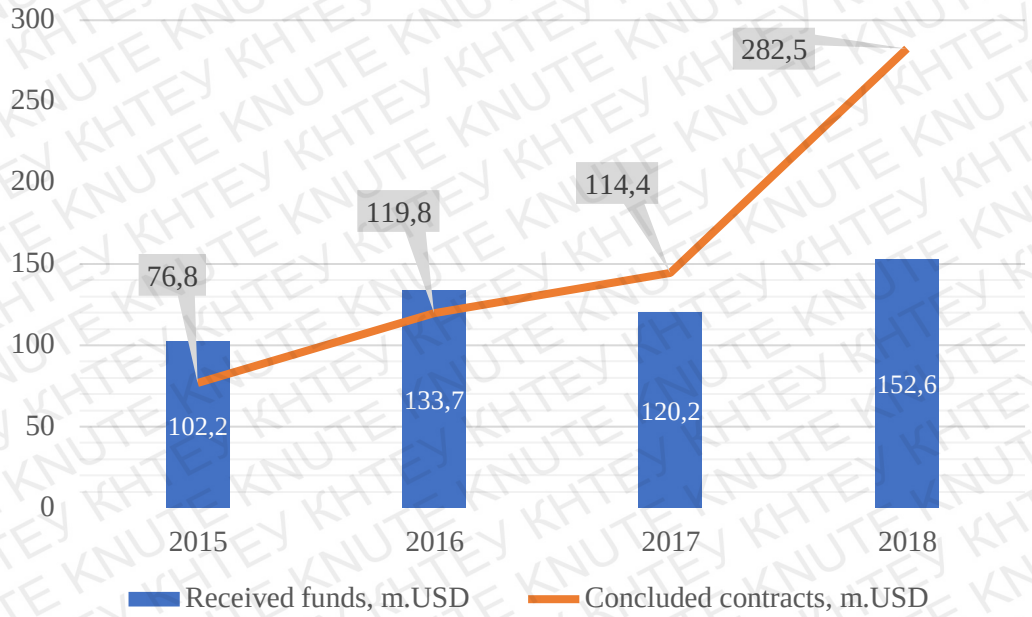


Figure 2.1. The dynamics of signed contracts in 2015-2018, m.USD [21]

The key trend for STE is an increase in the volume of signed contracts in 2018.

The largest export partners of the company in terms of amount and value of contracts signed in 2019 were India, Saudi Arabia, Algeria, Turkey, Myanmar, China, Korea, UAE.

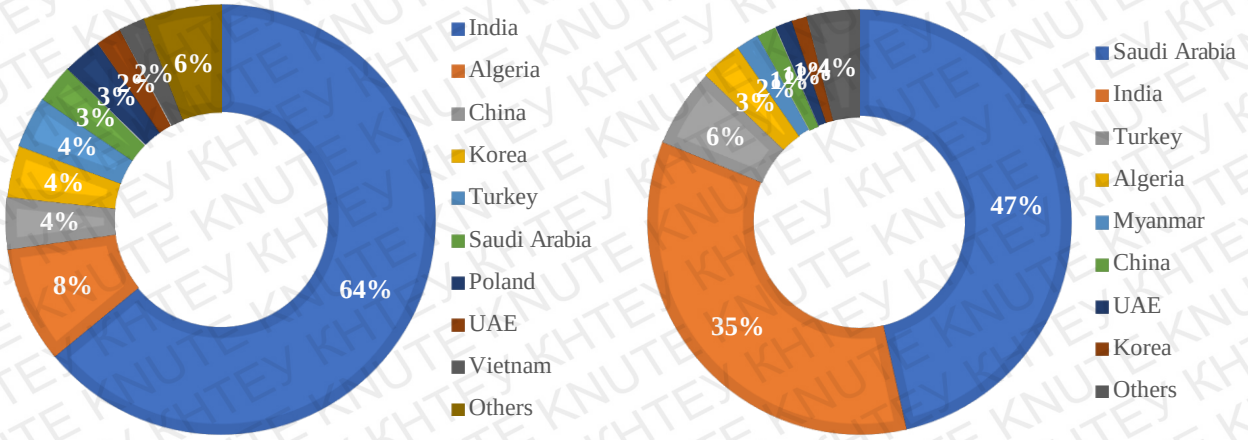


Figure 2.2. The structure of the export portfolio by country (amount and value of contracts), 2019, [composed by the author based on the appendix G]

The key and long-standing partner of STE is India, not least thanks to the sale of Soviet-made military equipment, its share in the company's exports by the amount of contracts concluded in the 7 months of 2019 was 64%, the value of contracts - 35%, second only to Saudi Arabia with 47% (due to the contract for the supply of anti-tank missile systems). The company is no less actively cooperating with Turkey, where there are also many projects, including the creation of new joint weapons. China and Korea are a new and promising area of Ukrainian military exports, since their orders are based on development services, engineering services and research, most of which are performed by professors at the Igor Sikorsky Kyiv Polytechnic Institute.

For several years now, about 10% of the company's revenue comes from research projects carried out in the interests of foreign customers. These are unique projects in which new technologies are developed at the expense of a foreign customer with the support of national scientific schools. The main areas of activity of SpecTechnoExport for import in 2018 were the supply of military radio systems, small arms and ammunition, light armored vehicles.

In order to confirm the above, a statistical grouping was carried out according to the nomenclature of arms on the contracts concluded by the enterprise. The outer

circle of the diagram shows the structural distribution of arms groups by the quantity of supply contracts, the inner circle shows the structural distribution by the value of contracts.

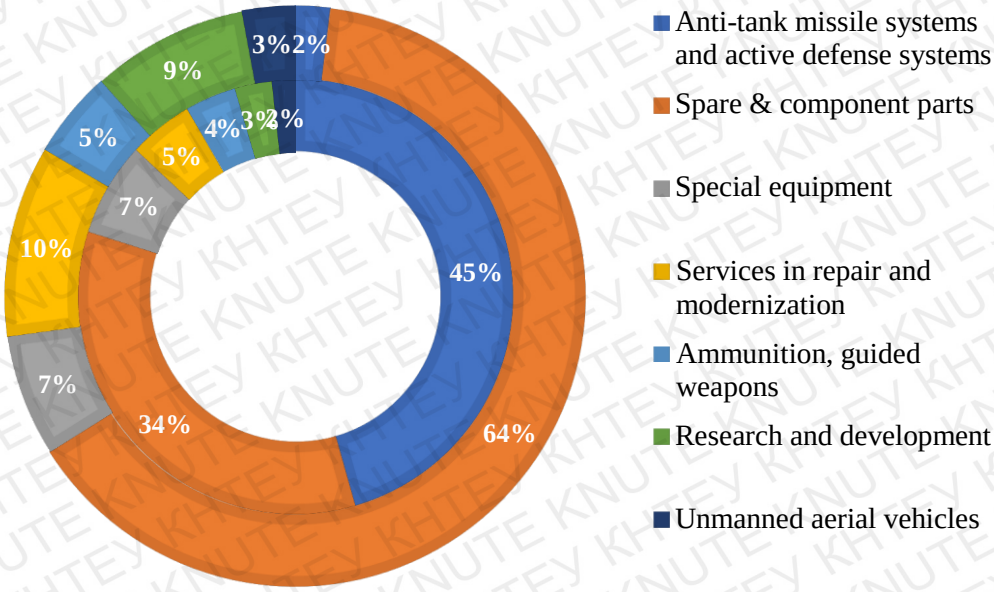


Figure 3.2. Structure of contractual agreements of enterprise by arms group, 2019, %, [composed by the author based on SFTE “SpetsTechnoExport” data]

The constructed diagram allows us to draw parallels between contract value and quantity depending on the type of weapons. Apparently, in terms of quantity, contracts for the supply of spare parts and repair services prevail, because the Ministry of Defense of India was the main contractor of the enterprise in all previous years. In third and fourth place in terms of quantity were research works and special equipment.

The situation with respect to contract values differs significantly, because with one signed contract for the supply of anti-tank missile systems, which is a modern development of the Ukrainian Design Bureau, its amount exceeds the sum of all contracts for the supply of spare parts and units. This observation allows us to conclude that it is advisable to focus on creating the conditions for investing in the development and production of new weapons within the country.

In order to conclude STE's competitiveness, it is worth mentioning that, first of all, the company is dealing with products of Ukrainian production, which it is obliged to distribute and sell to foreign customers. As UAVs are now in high demand in the global arms market, it is worth finding out how much domestic product can compete with an analogue product.

Table 2.7

Technical and economic characteristics of UAV samples

UAV model	Technical parameters					Economical parameters	
	Max speed, km/h	Max heigth, m	Flight length, min	Max take-off weigh, kg	Radius of action, km	Price per unit, $	Operating costs per year, $
"Leleka-100"	120	1500	120	5,5	45	31000	1278
"Warmate"	150	3000	60	4	20	16700	937
Weight coefficient, %	23	17	25	5	30	-	-

Source: calculated and composed by the author

Based on the technical parameters of UAV we have established the weight coefficients. Used in the table the technical parameters that characterizes the performance of the main functions of the product and some of its technical characteristics. The calculation of the individual index of competitiveness is calculated as follows:

$$q_i = \frac{P_i}{P_{io}} \; or \; q_i = \frac{P_{io}}{P_i} \qquad (2.2)$$

where Pi and Pi0 - value of the ith technical index, if the increase leads to the improvement of the quality, it uses the first of the above formulas, in the opposite case the second.

Thus, the calculation of the indicators for the UAV "Leleka - 100" / "Warmate":

$$q1 = 120/150 = 0,8;$$

$$q2 = 1500/3000 = 0,5;$$

$$q3 = 120/60 = 2;$$

$$q4 = 4/5,5 = 0,73;$$

$$q5 = 45/20 = 2,25$$

Next, calculate the group indices of competitiveness which can be defined by the formula:

$$I_{tp} = \sum_{i=1}^{n} q_i \times a_i \quad (2.3)$$

where qi is the unit index for the i-th technical indicator;

ai - weight i-th of technical indicator that is determined by expert evaluations (Σai = 1);

n - number of technical indicators being assessed.

$$I_{tp} = 0,8 \times 0,23 + 0,5 \times 0,17 + 2 \times 0,25 + 0,73 \times 0,05 + 2,25 \times 0,3 = 1,48$$

Factor bringing operating costs for the relevant year are given in table 2.8.

Table 2.8

Coefficients of adjustment of operating costs (UAV)

T, years	Ed, 32%
1	1
2	0,758
3	0,574

Source: calculated and composed by the author

$$ai = \frac{1}{(1+Ed)^t}, \quad (2.4)$$

where Ed - is the rate of depreciation

Group indicator, which takes into consideration the cost of the buyer for the entire period of operation of unmanned aircraft for the point of view of economic parameters calculated according to the formula:

$$I_{ep} = P + \sum_{i=1}^{T} Ci \times ai/Po + \sum_{i=1}^{T} Co \times ai, \quad (2.5)$$

where P, Po - the price of the goods valued, respectively, of the sample;

Ci, Co - total operating costs;

T - service life;

ai - the coefficient of changing of operational expenses for the respective year taking into consideration depreciation rates are given in table 2.8.

Consequently, the group index for the economic parameters for the production of the competing companies is equal to:

$$I_{7D} = \frac{\$31000 + \$1278 \times (1 + 0{,}758 + 0{,}574)}{\$16700 + \$937(1 + 0{,}758 + 0{,}574)} = 1{,}799$$

Find the integral indicator of competitiveness of production according to the formula:

$$\text{К} = \text{I}sr \times \frac{\text{I}tp}{\text{I}ep} \quad (2.6)$$

For real competitiveness on the market, take standard rate of Isr = 1, then the integral index:

$$К\frac{L}{w} = 1 \times \frac{1{,}48}{1{,}799} = 0{,}82 \text{ or } 82\%$$

This integral indicator of competitiveness indicates that the UAV of Ukrainian production by 18% loses its Polish counterpart and that is the reason. Although Ukrainian Leleka-100 performance is better in UAV specifications, the economic parameters impair the competitiveness of domestic goods, since they are almost fully stocked with imported electronics, which, unfortunately, is not cheap.

In Ukraine, there are a large number of enterprises involved in aviation, and therefore we have the technological and human resources to develop aviation vehicles, including UAVs. On the other hand, we need to think about not only opportunities but also obstacles. Two of the most acute problems is the technological and material base [22].

After all, the Ukrainian defense industry produces neither radio equipment and electronics for drones, nor special materials for the devices themselves, so there is a dependency on the supply of components. Without the activation of developments in electronics and the production of light composite materials would be difficult to develop the industry of unmanned aerial vehicles.

Conclusions to part 2

During the competitiveness study of SFTE "SpetsTecnoExport" in the international arms market, the PESTEL analysis method was applied to

comprehensively diagnose the external environment of the enterprise and to assess the level of international competitiveness using the integrated competitiveness indicator.

In the process of researching the key external factors influencing the activity of the special exporter, we were able to identify and weigh the impact of 23 main factors, organized according to political, economic, social, technological, environmental and legal groups. All these groups of factors have a significant impact on the enterprise, because the specificity of its activity causes its considerable dependence on state authorities, socio-economic environment, the level of technological progress, and especially the legal regulation of international arms trade at the micro and macro levels. Political and technological groups of factors were found to be the most influential.

In the process of studying the competitiveness of the enterprise in the world market, the structure of the export portfolio of the enterprise was analyzed by countries and by the nomenclature of arms. The main trading partner of the company - India has been identified, as evidenced by the amount and value of contracts concluded with this counter party. In contrast to such a stable partnership (in the majority of trade in obsolete military equipment and spare parts), a new potentially significant trading partner is Saudi Arabia, since one contract for the supply of a new model military equipment outweighs all contracts concluded with India, because of the need to increase the adaptability of military exports.

With the help of the integrated competitiveness index, we were able to evaluate its level in the context of the STE product as a military UAV. It is revealed that in comparison with the foreign analogue, the Ukrainian sample is less competitive in the market, the main reason being the high price of the goods due to the import dependence of the components in its manufacture.

PART 3
WAYS OF IMPROVING THE COMPETITIVENESS OF SFTE «SPETSTECHNOEXPORT» ON THE INTERNATIONAL ARMS MARKET

3.1. Development of a set of measures to improve the competitiveness of SFTE “SpetsTechnoExport”

The complex context of the modern ecosystem of the functioning of SpetsTechnoExport creates certain prerequisites for dynamic changes in the structure of the company's activity. Demand for technology transfer, localization of production is growing in key markets – no one wants to buy just "iron", former customers become competitors in the future, which creates a need for new understanding of the company's product and value creation, along with a focus on technological advancement. The country's enormous engineering and technological potential, aroused by military aggression (with the actual depreciation of fixed assets, lack of resources for modernization and development, and sometimes dubious product quality), is a "window of opportunity" for an innovative leap.

The company operates in more than 30 geographic markets, each with its own complex context (political, bureaucratic, historical, religious, geographical, geopolitical). For each market, a separate “client’s row” should be developed that takes into consideration the roles of customers and their needs to maximize value proposition. It is also important to form a holistic vision of a complex product for each market based on the needs of each client in the “client’s row”.

It was decided to design the proposed “clients’ rows” on a specific example of the Indian market. To this end, business professionals need to work out contexts in terms of their importance to the company, the goals of the company and the necessary actions to achieve the goals in the short, medium and long term, to formulate strategic assumptions and determine the necessary steps to implement a comprehensive value

proposition (including involvement of partners in Ukraine and abroad, organizational changes).

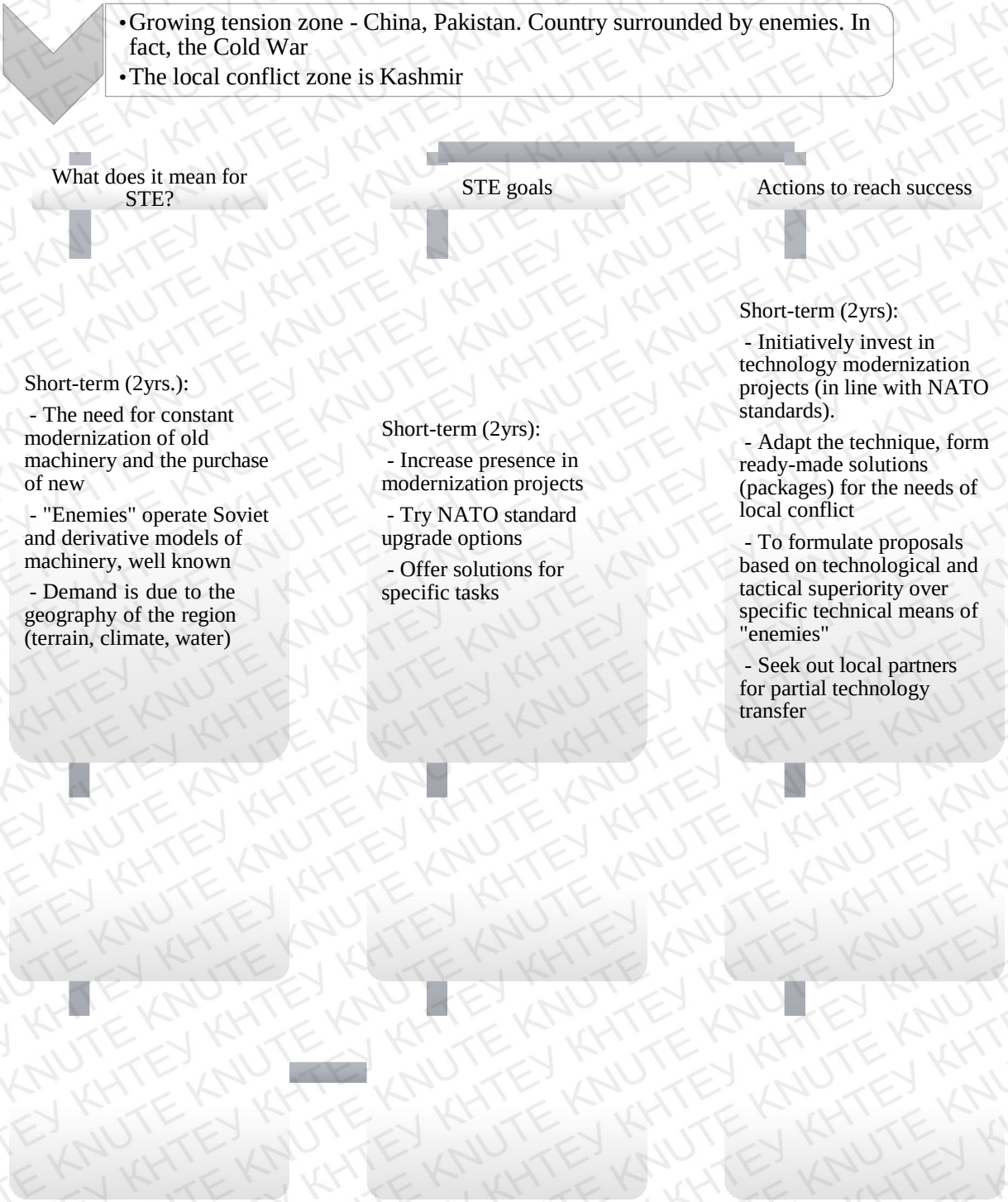


Figure 3.3. Developing the contextual component of the Indian market with the transition to strategic assumptions [composed by the author]

The next necessary step for the enterprise is to initiate and implement a clear division between sectors in the departments of all markets of the world, monthly control of the quality of the standardization of markets, adjustment of tasks and prioritization of projects. An important emphasis should be on research and consideration of geopolitical, military, historical, cultural and other contexts. It is necessary to study the types of weapons in the arsenal of defense agencies of the countries, the terms of use of the upgrade. No less important step is the systematic finalization of tenders, understanding of the budget, needs, trends, competition, systematic search for industrial, scientific and political partners [23, p. 424].

Changes in product specialization should also be initiated at the enterprise:

- Determination of responsibility in the company for specific areas; in the long term – creation of a product department with the division between sectors of separate directions.
- Cataloguing of products available in the world – technical characteristics, advantages and disadvantages, price parameters; tracking global trends and trends.
- Creation of internal catalogue of available products, contacts of suppliers, developers (including products of partner countries); portfolio diversification.
- Tracking projects / tenders in the world – repair and modernization of Soviet designs, replacement of outdated ones, sale of old equipment and more.
- Proposals to fill the gaps in the product portfolio – product development, affiliate programs (combinations, combinations, licensed production).

Based on the above proposals, we may offer a new approach to core business – a matrix sales structure (see tab.3.1), the essence of which should always be the responsibility of a specific project for two specialists: a country specialist, who will form the commercial part of the proposal (intermediaries, competition, partnerships,

cultural aspects) and a product specialist who will form the technical part of the proposal and ensure that suppliers receive commercial offers.

Table 3.1

Matrix structure of enterprise sales

			Regions (Sales)				
			All regions (70 people)	South, East, Central Asia, West, Central Africa, North America, Kuwait	Middle East, East Africa, Western Europe	South, Central Africa, Central, Eastern Europe, Oceania	Southeast Asia, North Africa, Central, South America
				DC №1 25 people	DC №2 10 people	DC №3 15 people	DC №4 15 people
Products (Marketing)	All products (26 people)						
	Armored vehicles and artillery	3 ppl.					
	Missiles and ammunition	3 ppl.					
	Aviation technology	5 ppl.					
	Space technology	3 ppl.					
	Optoelectronics, EWS, radar, air defense, detection, intelligence	5 ppl.					
	Marine platforms and tools	2 ppl.					
	Robotic platforms	3 ppl.					
	Shotgun equipment, personal protection, police	2 ppl.					

Source: composed by the author

The initiator of the project must be present at the negotiations, specialists (product and national) – the project team. The project can be initiated by any person in the company, however, without the necessary visas of the above specialists, requests for marketing, offers and approvals will not be sent. The standard created will be applied in the future by specialists assigned to specific markets for their development.

In the context of increasing the competitiveness of Ukrainian special exporters, offset activity should be considered as a way of obtaining the necessary technologies for the domestic military industry and military products. The Ukrainian defense-industrial complex is unable to master many modern technologies on its own, starting from the elemental base of microelectronics, microprocessor technology, nanotechnology, without which it is impossible to create modern models of weapons, ending with computers, night vision devices, and unmanned aerial weapons, land and sea based. The development of these technologies in Ukraine would significantly increase the profitability of enterprises, as these technologies are used in both civilian and military technology. In addition, the availability of these technologies allows the creation of samples of WME that can function in conditions of radio-electronic counteraction. Therefore, the domestic defense industry requires the acquisition of modern technologies for the production of military equipment [24].

The need for technical re-equipment of the Armed Forces of Ukraine determines the need for the importation of modern WME systems. Their cost is considerable, which is too burdensome for the State Budget today. In view of this, Ukraine has to introduce the practice of military-technical cooperation with foreign countries when importing WME, which would significantly reduce the burden on the budget and the national economy as a whole. When purchasing weapons and military equipment, it is more advantageous to use offset schemes [25]. Since the dominant tendency in the world arms market is the development of offset activity, so the domestic system of military-technical cooperation must take it into consideration in its development.

Offset agreements depend on the goals of the governments of the importing countries. Some countries (with the so-called “emerging economy”) are seeking to close some of the weapons gaps and target offset targets (example: Singapore, Taiwan). Other countries have regional power ambitions (such as Brazil, India, Indonesia,

Turkey) that require developing their own capabilities to produce the full range of weapons systems domestically, so their offset strategy focuses on technology transfer. Some countries see offset as an opportunity to revive a destroyed or degraded national military industry (for example, Poland) [26].

In our case, it would be advisable to apply a direct offset – compensation agreements that are executed by the exporter in the defense industries of the importer in the framework of the offset projects directly related to the supplied military products. As a rule, similar offset schemes reflect in:

- organization of joint ventures for the manufacture of individual components, parts and spare parts for the supplied PMS;
- organization of assembled production of supplied PMS or its individual components;
- transfer of technology, development and know-how for the production of PMS supplied, as well as components for the organization of this production in the importing country;
- procurement of defense-related products by locally-produced services, subcontracting to local defense-related enterprises;
- secondment of the supplier's specialists to provide technical assistance (consulting on the operation, repair and maintenance of the supplied PMS).

Based on all of the above, we have to understand that Ukraine will not be able to produce all the nomenclature of the required WME by itself. Therefore, one of the priorities of the military-technical cooperation should be the acquisition of certain foreign WME, their joint or licensed production, using leasing mechanisms and offset schemes.

3.2. Forecast assessment of the effectiveness of the proposed activities for SFTE “SpetsTechnoExport”

To date, more than 130 countries have been using offsets for the implementation of agreements in the field of military and technical cooperation. According to the Resolution of the Cabinet of Ministers of Ukraine No. 432 of April 20, 2011, there are the following types of compensation that can be provided under compensation (offset) agreements:

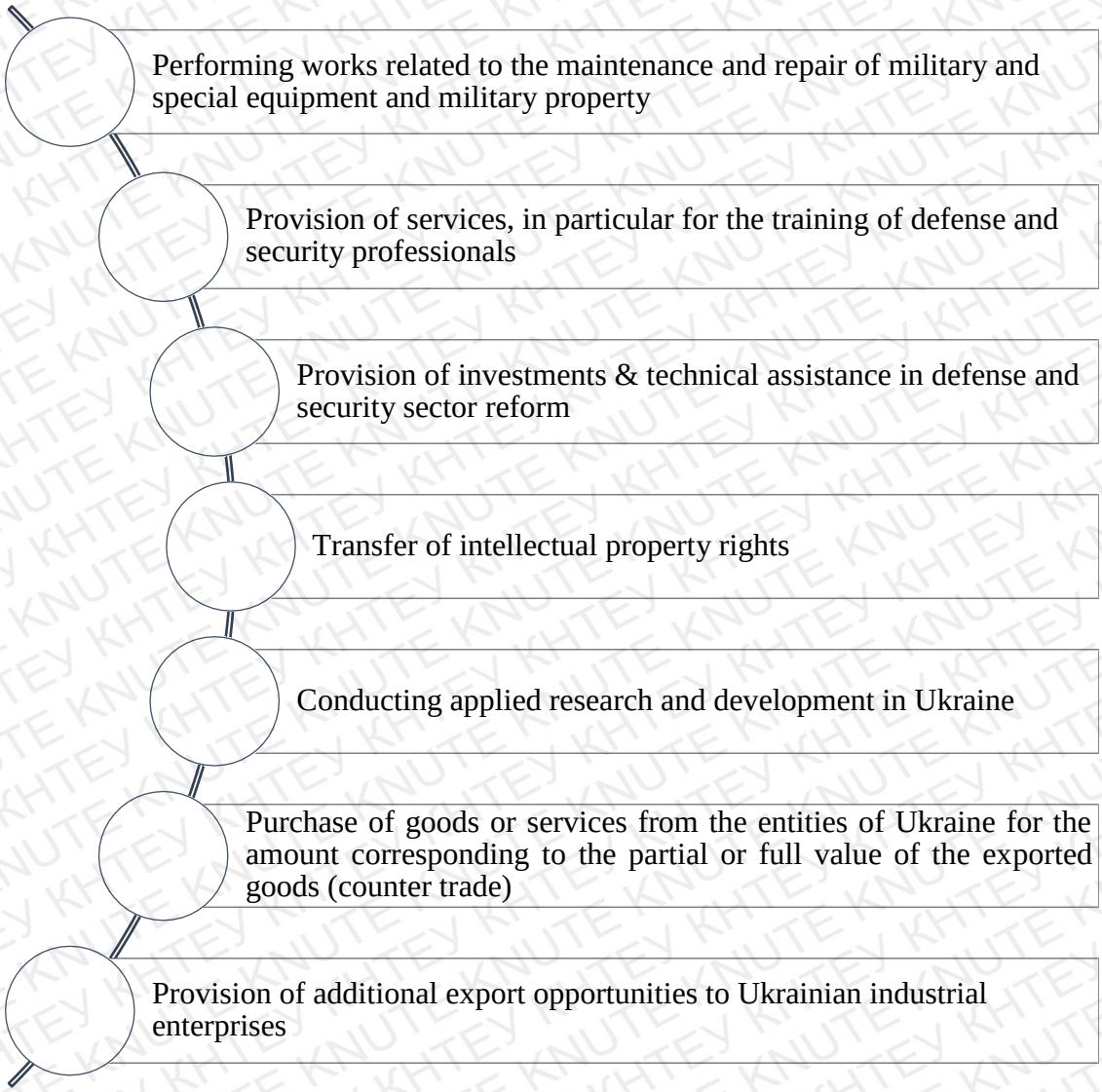


Figure 3.4. Types of offset compensation in Ukraine [27]

Given the identified problem of low competitiveness of UAV "Leleka-100" (mostly because of the overprice), we offered the following sequence of actions related to the organization of offset agreements, involving Ukrainian enterprises-manufacturers:

1. To acquire the necessary amount of ready-made weapons, military equipment and service tools;
2. To purchase technological equipment for carrying out aggregate-block assembly of weapons and equipment, which will allow to create a certain number of jobs (the components will come from the exporter with whom the offset scheme is carried out);
3. Create a design bureau and a specific cooperative enterprise (if necessary to purchase additional technologies) for the development and production of radio equipment and electronics for the UAV, similar to those coming from the exporter;
4. The gradual transition to the production of domestic components for the UAV, and the independent production of weapons and equipment.

As the bulk of the export of WME in Ukraine is carried out by a state intermediary, it is the special exporter who should take the most active part in organizing and implementing offset programs during the MTC. This will simultaneously form a major export contract for WME, and the offset program that accompanies it.

Thus, when forming a general export program (delivery of PMS and fulfillment of offset obligations), it is possible to optimize the components of this program (basic and offset contracts) above all by price. Moreover, offsetting is eventually paid for by the same importer, albeit indirectly.

Achieving the maximum contract price for WME in the main contract process and making it possible to choose the cheapest option for the exporter, which is of great

importance for the importer of offset obligations (high offset cost of measures can be ensured with the help of multipliers at low nominal cost) military-technical cooperation.

To evaluate the proposed measures to enhance the competitiveness of UAVs exported by STEs, it is important to understand their potential impact on the price of these UAVs. That is, if the implementation of our proposed steps to implement the optimal offset agreements for the Ukrainian defense industry is successful and the use of imported components is gradually transformed into the production of its own radio equipment and electronics required for UAV, then in the future it will affect the competitiveness of exported products.

In order to assess the potential impact on the competitiveness of the Ukrainian UAV "Leleka-100", we followed a gradual change in the integral coefficient of competitiveness of this product, depending on the percentage at which the price will drop if the import components are abandoned and replaced by local production.

At the same time, we consider the technical parameters of the UAV "Leleka-100" unchanged and compare it with the Polish analogue of the UAV "Warmate", the index of technical parameters remains unchanged, as well as the coefficients of operating costs:

$$I_{\text{тп}} = 0{,}8 \times 0{,}23 + 0{,}5 \times 0{,}17 + 2 \times 0{,}25 + 0{,}73 \times 0{,}05 + 2{,}25 \times 0{,}3 = 1{,}48$$

According to experts, the rate of depreciation in the operation of military unmanned aerial vehicles is 32%, so the coefficients of change in operating costs will be respectively: ai1 = 1; ai2 = 0.758; ai3 = 0.574.

In our case, the index of economic parameters, which includes the price for the UAV and the cost of its operation, is subject to recalculation:

Table 3.2

Forecasting the price competitiveness of SFTE “SpetsTechnoExport”

Price decrease, %	P+Ci*(ai1+ai2+ai3)	P+Co*(ai1+ai2+ai3)	Iep
5,00%	32281,28	18885,08	1,71
10,00%	30582,27	18885,08	1,62
15,00%	28883,25	18885,08	1,53
20,00%	27184,24	18885,08	1,44
25,00%	25485,22	18885,08	1,35

Source: calculated and composed by the author

After calculating the index of economic parameters, we can calculate the final integral index of competitiveness. The table 3.3 shows that UAV "Leleka-100" becomes a competitive commodity in comparison with its Polish counterpart, with a decrease in its price and operating costs by 20%.

Table 3.3

Forecasting the integral competitiveness of SFTE “SpetsTechnoExport”

Price decrease, %	Price after decrease, $	Operating costs after decrease, $	Competitiveness
5,00%	29450	1214,10	0,87
10,00%	27900	1150,20	0,91
15,00%	26350	1086,30	0,97
20,00%	24800	1022,40	**1,03**
25,00%	23250	958,50	**1,10**

Source: calculated and composed by the author

The proposed measures to increase STE's competitiveness are multidirectional, since they cover both the company's internal sphere of operation (changes in departments, personnel policy) and external (application of integrated solutions to

foreign partners and facilitating their interaction with Ukrainian arms manufacturers through concluding offsets).

The company will in fact act as a system integrator thanks to its unique knowledge of different suppliers, customer needs and options to meet them. With regard to strategic assumptions about the financial performance of the enterprise, we can forecast that the new approach to investing in technological development will allow to counteract the detrimental effect of narrowing the list of products that special exporters can offer to foreign customers.

Table 3.4

Development targets for «SpetsTechnoExport»

Strategic goals	**2018**	**2019**	**2020**	**2021**	**2022**
Finances					
- contracting volume, $ million	282,5	337,8	382,4	415,6	463,4
- gross profit, $ million	10,1	14,5	18,3	22,5	28,0
- share of gross profit from contracting volumes, %	3,6	4,3	4,8	5,4	6,0
- volume of investments, millions of dollars	-	-	1,1	1,7	2,5
Product					
- share of innovative products in sales, %	4%	7%	10%	15%	25%
- share of income from technology transfer and production localization, %	5%	10%	20%	25%	30%
Customers					
- number of markets with a volume of more than $ 5 million per year	7	10	13	15	17
- revenue share received through partnership and multilateral agreements, %	10%	15%	25%	30%	35%
Development and training					
- number of contract specialists who have worked for 3 years or more	51	54	58	62	67

Source: calculated and composed by the author

Scope of contracting – depends entirely on professional staff (contract specialists) with unique competencies and experience. One of the strategic goals is to increase the efficiency of contracting for the 1st specialist - from $ 5.5 million per year to $ 6.9 million over 5 years. Consideration should also be given to attracting new specialists with their further integration into the company's business model and training (while maintaining contract volumes) - no more than 3-5 people per year. To do this, company should develop job profiles, and conduct a separate interview with the competencies using case testing and case management.

In order to make the above targets a reality, an enterprise must use its core competence – to convince all stakeholders of the feasibility of a project. After all, a special exporter is strong and interesting when he brings added value to the project. It can be both a monetary resource, and intelligence, contacts, the ability to convince, to organize cooperation.

Conclusions to part 3

In this part we decided to propose a separate “client’s row” for each market and design it on a specific example of the Indian market. To this end, business professionals need to work out contexts in terms of their importance to the company, the goals of the company and the necessary actions to achieve the goals in the short, medium and long term, to formulate strategic assumptions and determine the necessary steps to implement a comprehensive value proposition.

Also, we offered for the company a new approach to core business – a matrix sales structure, the essence of which should always be the responsibility of a specific project for two specialists: a country specialist, who will form the commercial part of the proposal and a product specialist who will form the technical part of the proposal and ensure that commercial offers are received from suppliers.

Having analyzed the experience of the leading arms exporters, we concluded that it is advisable to use offset schemes for the studied enterprise. In our case, it would be advisable to apply a direct offset – compensation agreements that are executed by the exporter in the defense industries of the importer in the framework of the offset projects directly related to the supplied military products.

As the bulk of the export of WME in Ukraine is carried out by a state intermediary, it is the special exporter who should take the most active part in organizing and implementing offset programs during the MTC. This will simultaneously form a major export contract for WME, and the offset program that accompanies it.

This approach to MTC will in the long term eliminate the dependence on key components for exported technological weapons due to the appropriate conditions of technology transfer under offset transactions. Forecast calculations of the integrated competitiveness of the Ukrainian UAV indicate that with a 20% reduction in price and operating costs, the domestic sample becomes more competitive in the international arms market than its foreign counterpart.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, we were able to come to the following conclusions and proposals on the development of competitiveness of the company special exporter and the diversification of exports of WME, taking into consideration the identified major trends in the world market:

1. The macro-analysis of the global arms trade market has shown us the steadily increasing dynamics of arms exports and imports over the past decade, triggered by a series of military conflicts, as well as by the dominance of "monopoly" countries in markets such as the US and Russia, which substantially substantiates. Regarding Ukraine's place on the world stage, it should be noted that after an active policy of selling Soviet-made military equipment, our country has fallen into several positions due to insufficient technological capabilities of exported weapons.
2. The beginning of Russian aggression entailed irreversible changes in the structure of SpetsTechnoExport, namely the termination of cooperation with the Russian Federation, the narrowing of the range of arms, to which the control authorities issue an export license, the increase of state defense orders, the special exporter commission for which are minimal enterprises due to a significant decrease in profits.
3. Diagnosis of the external environment of the enterprise activity by PESTEL analysis enabled us to identify key factors of influence on the enterprise and their weight. Political instability, growing military tension, armed conflicts all naturally lead to militarization and increased demand for weapons. Due to the deep link between the government and the defense industry, factors such as political stability and state policy have a particular impact on the functioning of the company, especially in times of Russian aggression that affected eastern Ukraine with several strategically important enterprises.

4. It is revealed that today active clients and partners of SpetsTechnoExport are military agencies of Ukraine and foreign countries, public and private companies from more than 30 countries of the world. The main partner of the export company is the Republic of India, where since 2000 the official representative office of "Spetechnoexport" has been successfully operating. Algeria, Indonesia, Malaysia, China, Poland, Turkey are also key export partners of the company. The company can implement complex projects for the needs of foreign customers, from the stage of research to serial manufacturing of finished products.
5. The analysis of the nomenclature of arms and the concluded foreign trade contracts allowed the company to draw parallels between the value of the contracts and the quantity, depending on the type of weapon. This leads to the conclusion that it is advisable for enterprises to focus on creating conditions for investment in the development and production of innovative and capital-intensive products. In the process of assessing the competitiveness of products sold by STE by technical and economic parameters, it was concluded that the Ukrainian UAV is 18% less competitive compared to a similar sample of a foreign competitor, which is due to economic parameters to a greater extent.
6. The complex context of the modern ecosystem of functioning SFTE "SpetsTechnoExport" creates some prerequisites for dynamic change in the structure of company activity. Demand for technology transfer, localization of production is growing in key markets - nobody wants it to buy just "iron", former customers become competitors in a future that creates a need for a new understanding of the product company and value creation along with a technology focus outstripping.
7. For each market, a separate client line should be developed that takes into account the roles of clients and their needs to maximize value proposition. It is

also important to form a coherent vision complex product for each market based on the needs of each client.

8. A new approach to doing business is proposed - a matrix structure of sales, the essence of which is the allocation of project-specific responsibilities between two specialists: a specialist from the country who will form the commercial part of the proposal and a specialist in the product, who will form the technical part of the proposal and ensure the receipt of commercial offers from suppliers. It was also considered appropriate to introduce offset agreements with the use of offsets aimed at transferring technologies for the production of key components for the studied UAV, so that in the long term its price became more competitive.
9. The concrete steps for the introduction of offset agreements are proposed, as well as the optimal percentage reduction in the price and cost of operating the UAV sample under conditions of offset compensation agreements. This will increase the competitiveness of this product, and in the future, in the case of expanding the practice of offset agreements, will increase the level of manufacturability of goods sold by the special exporter, and therefore the demand for it will increase, which will entail maximizing the profits of the enterprise and thus more competitiveness.

REFERENCES

1. Matyushenko I. Yu. Svitovyj rynok ozbroyen": perspektyvy dlya Ukrayiny / I. Yu. Matyushenko, K. V. Koval"chuk. // Ekonomika ta upravlinnya nacional"nym hospodarstvom. – 2017. – P. 32–40.
2. Abramson J. U.S. Leads Rising Global Arms Trade [Electronic source] / Jeff Abramson // Arms Control Assosiation. – 2017. – Resource access mode: https://www.armscontrol.org/act/2017-03/news/us-leads-rising-global-arms-trade
3. Lebacher M. Exploring Dependence Structures in the International Arms Trade Network / M. Lebacher, G. Kauermann., 2018. – 21 p.
4. SIPRI Arms transfers database [Electronic source] – Resource access mode://www.sipri.org/databases/armstransfers
5. Triumf USA i uverennoe padenie Ukrainy: Glavnye tendencii mirovoj torgovli oruzhiem po versii SIPRI [Electronic source] // 112.ua. – 2019. – Resource access mode: https://112.ua/glavnye-novosti/triumf-ssha-i-uverennoe-padenie-ukrainy-glavnye-tendencii-mirovoy-torgovli-oruzhiem-po-versii-sipri-483615.html
6. Shalal A. U.S. arms makers see booming European demand as threats multiply [Electronic source] / Andrea Shalal // Reuters. – 2019. – Resource access mode: https://www.reuters.com/article/us-france-airshow-usa-arms/u-s-arms-makers-see-booming-european-demand-as-threats-multiply-idUSKCN1TO0WF.
7. SIPRI Yearbook 2019: Armaments, Disarmament and International Security (summary) [Electronic source] // Stockholm International Peace and Research Institute. – 2019. – Resource access mode: https://www.sipri.org/sites/default/files/2019-08/yb19_summary_eng_1.pdf.

8. The SIPRI Top-100 arms-producing and military services companies [Electronic source] / [A. Fleurant, A. Kuimova, N. Tian та ін.] // Stockholm International Peace and Research Institute. – 2018. – Resource access mode: https://www.sipri.org/sites/default/files/2018-12/fs_arms_industry_2017_0.pdf
9. Yerin D. L. Svitoviy rynok ozbojen: Dynamika i geografichna struktura / Yerin D. L. // DVNZ "Kiyivskij nacionalnij ekonomichnij universitet imeni Vadima Getmana" – 2016.
10. Minfin: Pidpriyemstva OPK splachuvatimut do byudzhetu 30% pributku [Electronic source] // Uryadovij portal. – 2019. – Resource access mode: https://www.kmu.gov.ua/ua/news/minfin-pidpriyemstva-opk-splachuvatimut-do-byudzhetu-30-pributku
11. Higgins A. In Ukraine, Corruption Is Now Undermining the Military [Electronic source] / Andrew Higgins // The New York Times. – 2018. – Resource access mode: https://www.nytimes.com/2018/02/19/world/europe/ukraine-corruption-military.html.
12. Kanevskij G. Pochemu proizvoditeli oruzhiya begut iz Ukrainy [Electronic source] / Gleb Kanevskij // Ekonomicheskaya pravda. – 2019. – Resource access mode: https://www.epravda.com.ua/rus/publications/2019/04/4/646681/
13. Solovyan V. Ukrainskaya «oboronka»: v poiske alternativ [Electronic source] / Vladimir Solovyan // Vremya. – 2016. – Resource access mode: http://timeua.info/post/oborona-i-bezopasnost/ukrainskaya-oboronka-v-poiske-al-ternativ-03740.html.
14. Bitzinger R. The Globalization of the Arms Industry: The Next Proliferation Challenge / Richard Bitzinger. // The MIT Press. – 2016. – P. 170–198.
15. Stohl R. Understanding the Conventional Arms Trade [Electronic source] / Rachel Stohl // AIP Conference Proceedings. – 2017. – Resource access mode: https://aip.scitation.org/doi/pdf/10.1063/1.5009220.

16. Brunet P. Armed robots, autonomous weapons and ethical issues [Electronic sourse] / Pere Brunet // “Future Wars” Conference. – 2018. – Resource access mode: http://www.centredelas.org/en/publications/articles/3807-armed-robots-autonomous-weapons-and-ethical-issues.
17. Development of Weapon Systems in Developing Countries: A Case Study of Long Range Strategies in Taiwan., 2015. – C. 1041–1050.
18. Crawford N. The Pentagon Emits More Greenhouse Gases Than Any Other Part of the US Gov't [Electronic source] / Neta Crawford // Live Science. – 2019. – Resource access mode: https://www.livescience.com/65698-defense-department-climate-change.html.
19. Pavel C. Raw materials in the European defense industry [Electronic source] / C. Pavel, E. Tzimas // European Comission. – 2016. – Resource access mode: https://setis.ec.europa.eu/sites/default/files/reports/raw_materials_in_the_european_defense_industry.pdf.
20. Hamilton T. Regulating the arms trade - the potential of international criminal law / Tomas Hamilton., 2015. – 21 p.
21. Zvit pro upravlinnya DP DGZP «Spectehnoeksport» za 2018 rik [Electronic source] // SpetsTechnoExport. – 2019. – Resource access mode: https://spetstechnoexport.com/system/documents/attachments/000/000/057/original/STE-broshura_Zvit-upravlinnya-ukr_SCREEN.pdf?1562837756
22. Masnij V. Ukrayinski vijskovi droni: vid sklyanki z granatoyu do udarnogo hajteku [Electronic source] / Vyacheslav Masnij // Ukrinform. – 2019. – Resource access mode: https://www.ukrinform.ua/rubric-technology/2645524-ukrainski-vijskovi-droni-vid-sklanki-z-granatou-do-udarnogo-hajteku.html
23. The Military Balance. // The International Institute for Strategic Studies. – 2018. – 517 p.

24. Kutovij O. P. Ofsetna diyalnist yak sposib otrimannya neobhidnih tehnologij dlya vitchiznyanoyi vijskovoyi promislovosti ta produkciyi vijskovogo priznachennya dlya potreb Zbrojnih Sil Ukrayini / O. P. Kutovij, S. M. Chumachenko, A. V. Fatalchuk. // Centr voyenno-strategichnih doslidzhen Nacionalnogo universitetu oboroni Ukrayini imeni Ivana Chernyahovskogo. – 2014. – №1. – P. 58–64.
25. Malishenko Yu.V. Oboronni zakupivli iz zastosuvannyam ofsetnih ugod: dosvid Respubliki Polshi ta mozhlivosti dlya Ukrayini // Voyenna politika i problemi OPK. – 2009. - №4. - P. 128-135.
26. Postanova Kabinetu Ministriv Ukrayini "Pro zatverdzhennya Poryadku ukladennya kompensacijnih (ofsetnih) dogovoriv ta vidiv kompensacij, sho mozhut nadavatisya za kompensacijnimi (ofsetnimi) dogovorami" vid 20 kvitnya 2011 r. № 432 [Electronic sourse]. – 2011. – Resource access mode: https://zakon.rada.gov.ua/laws/show/432-2011-%D0%BF.
27. Zakon Ukrayini "Pro osoblivosti upravlinnya ob'yektami derzhavnoyi vlasnosti v oboronno-promislovomu kompleksi" [Electronic sourse] // Vidomosti Verhovnoyi Radi Ukrayini. – 2012. – Resource access mode: https://zakon.rada.gov.ua/laws/show/3531-17.
28. Minekonomrozvitku iniciyuye stvorennya spilnih pidpriyemstv ta zaprovadzhuye instrumenti spilnoyi diyalnosti v OPK [Electronic sourse] // Pres-sluzhba Minekonomrozvitku. – 2018. – Resource access mode: http://www.me.gov.ua/News/Detail?lang=uk-UA&id=1a6c6b93-e81a-4112-a65f-8fd62d297e82&title=MinekonomrozvitkuInitsiiuStvorenniaSpilnikhPidprimstvTaZaprovadzhuInstrumentiSpilnoiDiialnostiVOpk.
29. Sokirko Yu. Direktor «Spectehnoeksporta» Pavel Barbul: «Uhodim ot eksporta sovetskogo VVT k postavkam vysokotehnologichnoj produkcii» (Chast 2)

[Electronic source] / Yuliya Sokirko // UAprom. – 2015. – Resource access mode: http://uaprom.info/article/5940-direktor-spectehnoeksporta-pavel-barbul-uhodim-eksporta-sovetskogo-vvt-postavkam-vysokotehnologichnoj-produkcii-chast.html

30. 4th Session of India-Ukraine working group on Trade and Economic Cooperation held in New Delhi [Electronic sourse] // Press Information Bureau of government of India. – 2019. – Resource access mode: https://pib.gov.in/newsite/PrintRelease.aspx?relid=189626.
31. Makaryuk O. Investicijnij potencial pidpriyemstv oboronno-promislovogo kompleksu Ukrayini / O. Makaryuk, L. Melnik, B. Moskalenko. // Aktualni problemi ekonomiki. – 2015. – №9. – P. 206–214.
32. NATO Standardization Office (NSO) Public Web site [Electronic sourse] – Resource access mode: https://nso.nato.int/nso/.
33. Arms Trade Treaty [Electronic sourse]. – 2018. – Resource access mode: https://thearmstradetreaty.org/.
34. Make in India [Electronic sourse] – Resource access mode: http://www.makeinindia.com/sector/defense-manufacturing.
35. The official website of International Institute for Strategic Studies (IISS) [Electronic sourse] – Resource access mode: https://www.iiss.org/.
36. Zakon Ukrayini "Pro vnesennya zmin do deyakih zakonodavchih aktiv Ukrayini shodo zdijsnennya zakupivel produkciyi, robit i poslug oboronnogo priznachennya za importom" №2672-VIII [Electronic sourse] // Vidomosti Verhovnoyi Radi Ukrayini. – 2019. – Resource access mode: https://zakon.rada.gov.ua/laws/show/2672-19.
37. Zgurec S. Vladislav Belbas: eksport zbroyi - ce bilshe, nizh prosto biznes [Electronic sourse] / Sergij Zgurec // Defense Express. – 2019. – Resource access

mode: https://defense-ua.com/index.php/statti/8390-eksport-zbroyi-tse-bilshe-nizh-prosto-biznes.

38. M. Bezpartochnyi. Conceptual aspects management of competitiveness the economic entities / M. Bezpartochnyi, I. Britchenko. – Przeworsk: Higher School of Social and Economic, 2019. – 271 p.
39. A. Pawlik. National economic development and modernization: experience of Poland and prospects for Ukraine / A. Pawlik, K. Shaposhnykov. – Kielcach: State University of Jan Kochanowski, 2017. – 325 p.
40. Kalyuzhnyj V. Ya. Pidvyshhennya konkurentospromozhnosti pidpryyemtsva / Kalyuzhnyj V. Ya., Zubko T. L. // «Ekonomika. Menedzhment. Biznes». – 2015. – No3. – S. 127–132.
41. Holomb V.V. Teoretychni aspekty formuvannya konkurentospromozhnosti pidpryyemtsva / Holomb V.V., Zhyronkina V.S.. // Ekonomichnyj visnyk Zaporiz"koyi derzhavnoyi inzhenernoyi akademiyi. – 2018. – No4. – S. 78–81.
42. Siudek T. Competitiveness in the economic concepts, theories and empirical research / T. Siudek, A. Zawojska // Oeconomia / T. Siudek, A. Zawojska. – Warsaw: Warsaw University of Life Sciences – SGGW, 2014. – P. 91–108.
43. Aiginger K. Competitiveness under New Perspectives / K. Aiginger, S. Bärenthaler-Sieber., 2013. – 86 p.
44. The Case for Trade and Competitiveness, 2015. – 15 p. – (World Economic Forum).
45. The effect of innovation on competitiveness. // Ekonometri ve İstatistik Sayı / , 2016. – P. 60–81.
46. Ukraine and the world [Electronic sourse] // Defense Express. – 2018. – Resource access mode: https://defense ua.com/index.php/en/publications/defense-express-publications/5379-ukraine-and-the-world.

47. Rozporyadzhennya vid 20 chervnya 2018 r. № 442-r "Pro shvalennya Strategiyi rozvitku oboronno-promislovogo kompleksu Ukrayini na period do 2028 roku" [Electronic sourse] // Kabinet Ministriv Ukrayini. – 2018. – Resource access mode: https://zakon.rada.gov.ua/laws/main/442-2018-%D1%80.
48. Perspektivi derzhavnoї politiki eksportu ta importu ozbroєnnja i vijs'kovoї tehniki [Electronic sourse] // Strategichni prioriteti. – 2015. – Resource access mode: file:///Users/marinalevytskaya/Downloads/spa_2015_2_4.pdf.
49. Zavyalova M. The basis of competitiveness of enterprise products / Marina Zavyalova. – 2017. – C. 85–92.
50. Chabowski B. A Review of Global Competitiveness Research: Past Advances and Future Directions / Brian Chabowski. // Journal of International Marketing. – 2017. – No25. – C. 1–24.
51. The official website of the World Bank Data Bank [Electronic sourse] – Resource access mode: https://data.worldbank.org/about/get-started.

APPENDICES

Appendix A

Dynamics of world military expenditure by country and share of GDP, m.US$

	2014		2015		2016		2017		2018	
Country	**Defense spending, current US$ m.**	**Share of GDP, %**	**Defense spending, current US$ m.**	**Share of GDP, %**	**Defense spending, current US$ m.**	**Share of GDP, %**	**Defense spending, current US$ m.**	**Share of GDP, %**	**Defense spending, current US$ m.**	**Share of GDP, %**
USA	609914,0	3,5	596104,6	3,3	600106,4	3,2	605802,9	3,1	648798,3	3,2
China	200772,2	1,9	214093,1	1,9	216031,3	1,9	227829,4	1,9	249996,9	1,9
Saudi Arabia	80762,4	10,7	87185,9	13,3	63672,8	9,9	70400,0	10,3	67554,7	8,8
Russia	84696,5	4,1	66418,7	4,9	69245,3	5,5	66527,3	4,2	61387,5	3,9
India	50914,1	2,5	51295,5	2,4	56637,6	2,5	64559,4	2,5	66510,3	2,4
France	63613,6	2,2	55342,1	2,3	57358,4	2,3	60417,5	2,3	63799,7	2,3
UK	59182,9	1,9	53862,2	1,9	48118,9	1,8	46433,3	1,8	49997,2	1,8
Japan	46881,2	1,0	42106,1	1,0	46471,3	0,9	45387,0	0,9	46618,0	0,9
Germany	46102,7	1,2	39812,6	1,2	41579,5	1,2	45381,7	1,2	49470,6	1,2
Korea, South	37552,3	2,7	36570,8	2,6	36885,3	2,6	39170,7	2,6	43070,0	2,6
Ukraine	4033,3	3,0	3616,9	4,0	3423,3	3,7	3647,6	3,2	4750,2	3,8
Rest of the world	457526		394127		391688		420227		430398	
World	1687376,4		1715320,3		1715299,6		1734645,7		1822077,8	

Source: calculated and composed by the author based on SIPRI Arms Industry Database

Appendix B

The SIPRI Top 100 arms-producing and military services companies in the world (excluding China)

Rank (2017)	Company	Country	Arms Sales (2017)	Arms sales (2016)	Arms sales as a % of total sales (2017)
1	Lockheed Martin Corp.	United States	44920	40630	88
2	Boeing	United States	26930	29510	29
3	Raytheon	United States	23870	22910	94
4	BAE Systems	United Kingdom	22940	22790	98
5	Northrop Grumman Corp.	United States	22370	21400	87
6	General Dynamics Corp.	United States	19460	19230	63
7	Airbus Group	Trans-European	11290	12520	15
8	Thales	France	9000	8170	51
9	Leonardo	Italy	8860	8500	68
10	Almaz-Antey	Russia	8570	6110	94
11	United Technologies Corp.	United States	7780	6870	13
12	L-3 Communications	United States	7750	7630	79
13	Huntington Ingalls Industries	United States	6470	6720	87
14	United Aircraft Corp.	Russia	6440	5160	83
15	United Shipbuilding Corp.	Russia	4980	4060	89
16	Honeywell International	United States	4460	3480	11
17	Rolls-Royce	United Kingdom	4420	4450	23
18	Leidos	United States	4380	4300	43
19	Naval Group	France	4130	3480	99
20	Textron	United States	4100	4760	29
21	Booz Allen Hamilton	United States	4060	4000	70
22	General Electric	United States	3830	2480	3
23	Tactical Missiles Corp.	Russia	3600	2530	99
24	Mitsubishi Heavy Industries	Japan	3570	3670	10
25	Rheinmetall	Germany	3420	3260	51
26	MBDA	Trans-European	3380	3240	97
27	Babcock International Group	United Kingdom	3230	3380	47
28	Elbit Systems	Israel	3220	3100	95
29	Russian Helicopters	Russia	3170	2620	81

Continuation of appendix B

30	Bechtel Corp.	United States	3150	2820	12
31	Harris Corp.	United States	3040	4200	49
32	CACI International	United States	2980	2830	67
33	Safran	France	2910	2600	15
34	High Precision Systems	Russia	2830	1940	97
35	Science Applications International Corp.	United States	2760	2630	62
36	Saab	Sweden	2670	2770	84
37	Indian Ordnance Factories	India	2650	2280	96
38	Hindustan Aeronautics	India	2610	2460	94
39	CSRA	United States	2580	2250	48
40	United Engine Corp.	Russia	2570	1710	64
41	Israel Aerospace Industries	Israel	2480	2610	70
42	Orbital ATK	United States	2390	1920	50
43	Rockwell Collins	United States	2300	2230	34
44	General Atomics	United States	2220	1910	. .
45	Rafael	Israel	2210	1990	98
46	CEA	France	2170	2020	39
47	Russian Electronics	Russia	2140	1581	57
48	Kawasaki Heavy Industries	Japan	2140	2170	15
49	Hanwha Techwin	South Korea	2130	2250	57
50	Dassault Aviation Groupe	France	2120	1390	39
S	Bell Helicopter Textron (Textron USA)	United States	2080	2090	63
51	AECOM	United States	2070	2120	11
52	KRET	Russia	2060	1610	86
53	ThyssenKrupp	Germany	1920	1770	4
54	Oshkosh Corp.	United States	1840	1350	27
55	KBR	United States	1750	1090	42
56	Krauss-Maffei Wegmann	Germany	1750	1050	97
57	ST Engineering	Singapore	1680	1690	35
58	Fincantieri	Italy	1660	1600	29
59	Cobham	United Kingdom	1580	1550	60
60	LIG Nex1	South Korea	1560	1600	100
61	ASELSAN	Turkey	1420	1200	97
62	DynCorp International	United States	1420	1280	71
63	GKN	United Kingdom	1410	1210	11
64	Bharat Electronics	India	1380	1150	86
65	ManTech International Corp.	United States	1360	1460	79
66	Uralvagonzavod	Russia	1340	1680	60
67	Engility	United States	1300	1350	67

End of appendix B

68	BWX Technologies	United States	1300	1250	77
69	Serco	United Kingdom	1250	1500	29
70	Turkish Aerospace Industries	Turkey	1220	1120	86
71	Aerojet Rocketdyne	United States	1220	1180	65
72	TransDigm Group	United States	1190	950	34
73	PGZ	Poland	1190	1140	90
74	Hensoldt	Germany	1160	1160	95
75	Vencore	United States	1130	860	83
76	Vectrus	United States	1120	1190	100
77	Fujitsu	Japan	1110	1150	3
78	IHI Corp.	Japan	1070	1190	8
79	Sierra Nevada Corp.	United States	1020	900	64
80	Austal	Australia	1020	950	96
81	UkrOboronProm	Ukraine	1020	1060	96
82	DXC	United States	1000	1000	4
83	Nexter	France	960	910	95
84	Embraer	Brazil	950	930	16
85	DSME	South Korea	940	1190	10
86	Teledyne Technologies	United States	920	910	35
87	Navantia	Spain	910	710	93
88	Jacobs Engineering Group	United States	900	990	9
89	Precision Castparts Corp.	United States	900	880	10
90	Cubic Corp.	United States	890	880	60
91	Curtiss-Wright Corp.	United States	890	790	39
92	The Aerospace Corp.	United States	890	870	91
93	Meggitt	United Kingdom	880	940	34
94	Bharat Dynamics	India	880	730	100
95	RUAG	Switzerland	870	820	44
96	MIT	United States	870	770	86
97	Moog	United States	860	830	35
98	Korea Aerospace Industries	South Korea	860	1760	47
99	NEC Corp.	Japan	850	810	. .
100	CAE	Canada	840	780	38

Source: SIPRI Arms Industry Database

Appendix C

Analysis of volume and structure of assets of SFTE ”SpetsTechnoExport” in 2014 – 2018 (thousands of hryvnias)

Indexes	31.12.2014		31.12.2015		31.12.2016		31.12.2017		31.12.2018	
	thous. of hryvnias	part of the property in %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2014, %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2015, %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2016, %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2017, %
Intangible assets	765	0,1	0,05	-15,9	0,1	+37,8	1,0	+2195,6	0,9	-3,2
Fixed assets	10206	1,1	0,7	-14,0	0,6	+4,0	0,3	-20,1	0,5	+48,6
Total fixed assets	10971	1,2	0,7	-14,1	0,7	+6,3	7,7	+1531,8	8,0	+6,4
Accounts receivables for products, goods, works, services	63171	6,8	5,8	+20,1	8,8	+64,3	12,5	+113,9	10,7	-13,6
Accounts receivables for advances paid	649923	70,4	63,2	+26,8	46,4	-19,9	52,1	+68,5	57,0	+10,8
Other current receivables	22516	2,4	5,1	+192,9	14,0	+202,0	12,3	+31,7	9,6	-20,8
Money and cash equivalents	156920	17,0	24,9	+106,6	28,3	+24,1	13,3	-29,6	9,6	-26,6
Total current assets	912560	98,8	99,3	+41,8	99,3	+9,1	92,3	+39,6	92,0	+0,9
Balance	923531	100,0	100,0	+41,1	100,0	+9,1	100,0	+50,1	100,0	+1,3

Source: calculated and composed by the author based on SFTE “SpetsTechnoExport” data

Appendix D

Analysis of volume and structure of liabilities of SFTE ”SpetsTechnoExport” in 2014 – 2018 (thousands of hryvnias)

Indexes	31.12.2014		31.12.2015		31.12.2016		31.12.2017		31.12.2018	
	thous. of hryvnias	part of the property in %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2014, %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2015, %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2016, %	part of the property in %	Rate of increasing (+), decreasing (-) of the level of 2017, %
The registered capital	842	0,09	0,06	0,00	0,06	0,00	0,04	0,00	0,04	0,00
Additional capital	196160	21,2	20,7	+37,5	21,7	+14,5	17,1	+17,9	18,4	+9,2
Total equity	196782	21,3	20,7	+37,4	21,8	+14,4	17,1	+17,8	18,4	+9,2
Current accounts payable:										
for goods and services	6510	0,7	0,8	+63,2	0,3	-61,0	2,5	+1191,7	2,3	-9,2
for payments to budget	10468	1,1	1,4	+73,1	1,5	+21,5	0,8	-19,2	0,5	-42,1
for advances received	617065	66,8	67,5	+42,7	61,5	-0,8	63,0	+53,9	66,8	+7,4
Other current liabilities	92706	10,0	9,2	+29,9	14,7	+73,7	16,3	+65,8	10,0	-37,6
Total current liabilities	726749	78,7	79,3	+42,1	78,2	+7,6	82,9	+59,0	81,6	-0,3
Balance	923531	100,0	100,0	+41,1	100,0	+9,1	100,0	+50,1	100,0	+1,3

Source: calculated and composed by the author based on SFTE “SpetsTechnoExport” data

Appendix E

Aggregated balance sheet of SFTE ”SpetsTechnoExport” in 2014 – 2018 (thousands of hryvnias)

Assets	Code	On the 31.12.2014	On the 31.12.2015	On the 31.12.2016	On the 31.12.2017	On the 31.12.2018
1	**2**	**3**	**4**	**5**	**6**	**7**
I. Fixed assets						
Intangible assets:	1000	765	643	886	20339	19678
initial value	1001	909	1004	1489	21212	21291
accumulated depreciation	1002	144	361	603	873	1613
Incomplete capital investments	1005	-	-	-	-	-
Fixed assets:	1010	10206	8781	9128	7291	10834
initial value	1011	18710	19182	22324	21134	25710
depreciation	1012	8504	10401	13196	13843	14876
Investment Property	1015	-	-	-	-	-
Long-term biological assets	1020	-	-	-	-	-
Long-term financial investments: that records under the equity method other enterprises	1030	-	-	-	-	-
other financial investments	1035	-	-	-	-	-
Long-term receivables	1040	-	-	-	-	-
Deferred tax assets	1045	-	-	-	-	-
Other fixed assets	1090	-	-	-	135781	132660
Total for Section I	**1095**	**10971**	**9424**	**10014**	**163411**	**173836**
II. Current assets						
Inventories	1100	19377	486	9462	10898	13190
Current biological assets	1110	-	-	-	-	-
Accounts receivable for products, goods, works, services	1125	63171	75886	124651	266611	230354
Receivable accounts for advances paid	1130	649923	823970	659875	1111672	1231792

Continuation of appendix E

with a budget	1135	138	1	7120	30856	79854
including income tax	1136	-	-	-	-	-
Other current receivables	1155	22516	65945	199128	262313	207795
Current financial investments	1160	-	-	-	-	-
Money and cash equivalents	1165	156920	324125	402139	283043	207819
Prepaid expenses	1170	453	409	947	908	884
Other current assets	1190	62	3102	7970	3364	14738
Total for Section II	**1195**	**912560**	**1293924**	**1411292**	**1969665**	**1987485**
III. Non-current assets held for sale and disposal groups	**1200**	**-**	**-**	**-**	**37**	**-**
Balance	**1300**	**923531**	**1303348**	**1421306**	**21331133**	**2161321**

Liability	**Code**	**On the 31.12.2014**	**On the 31.12.2015**	**On the 31.12.2016**	**On the 31.12.2017**	**On the 31.12.2018**
1	**2**	**3**	**4**	**5**	**6**	**7**
I. Equity						
The registered capital	1400	842	842	842	842	842
Capital in revaluation	1405	-	-	-	-	-
Additional capital	1410	196160	269718	308726	363943	397311
Reserve capital	1415	210	210	210	210	210
Retained earnings (uncovered loss)	1420	-	-	-	-	-
Unpaid capital	1425	(430)	(430)	(430)	(430)	(430)
Withdrawn capital	1430	(-)	(-)	(-)	(-)	(-)
Total for Section I	**1495**	**196782**	**270340**	**309348**	**364565**	**397933**
II. Long-term liabilities and ensuring						
Deferred tax liabilities	1500	-	-	-	-	-
Long-term bank credits	1510	-	-	-	-	-
Other long-term liabilities	1515	-	-	-	-	-
Long-term ensuring	1520	-	-	-	-	-

End of appendix E

Targeted financing	1525	-	-	-	-	-
Total for Section II	**1595**	**-**	**-**	**-**	**-**	**-**
III. Current liabilities and ensuring						
Short-term bank credits	1600	-	-	-	-	36100
Current accounts payable: for the long term obligations	1610	-	-	-	-	-
for goods and services	1615	6510	10623	4148	53578	48634
for payments to budget	1620	10468	18117	22011	17784	10289
including income tax	1621	6584	6204	7136	7356	4649
for insurance payments	1625	-	530	250	227	327
for payments of wages	1630	-	1617	2011	1956	2815
Current ensuring	1660	-	1411	829	4048	5332
Deferred income	1665	-	-	-	-	-
Other current liabilities	1690	92706	120401	209147	346825	216356
Total for Section III	**1695**	**726749**	**1033008**	**1111958**	**1768548**	**1763388**
IV. Liabilities related to non-current assets held for sale and disposal groups	**1700**	**-**	**-**	**-**	**-**	**-**
Balance	**1900**	**923531**	**1303348**	**1421306**	**2133113**	**2161321**

Source: SFTE “SpetsTechnoExport” data

Appendix F

Income statement of SFTE ”SpetsTechnoExport” in 2014 – 2018 (thousands of hryvnias)

Item	Code	2014	2015	2016	2017	2018
1	2	3	4	5	6	7
Net income (revenue) from sales of products (goods and services)	2000	71232	298724	632686	607354	1938486
Cost of sales of products (goods and services)	2050	(11287)	(139552)	(437078)	(434894)	(1662448)
Gross:						
profit	2090	59945	159172	195608	172460	276038
loss	2095	(-)	(-)	(-)	(-)	(-)
Other operating income	2120	134061	242447	150634	116318	133888
Administrative expenses	2130	(51945)	(73395)	(100569)	(115363)	(150593)
Selling expenses	2150	(2327)	(26147)	(17502)	(22196)	(45123)
Other operating expenses	2180	(64086)	(196477)	(136798)	(85222)	(146530)
Financial results of operations:						
profit	2190	75648	105600	91373	65997	67680
loss	2195	(-)	(-)	(-)	(-)	(-)
Other financial income	2220	-	-	-	-	911
Other income	2240	-	-	-	-	6
Financial expenses	2250	(-)	(-)	(6135)	(1642)	(5312)
Losses from equity	2255	(-)	(-)	(-)	(-)	(-)
Other expenses	2270	(24)	(12)	(-)	(-)	(82)
Financial results before tax:						
profit	2290	75624	105588	85238	64355	63203
loss	2295	(-)	(-)	(-)	(-)	(-)
Expenses (income) income tax	2300	12496	19050	15290	12734	13326
Net financial result:						
profit	2350	63128	86538	69948	51621	49877
loss	2355	(-)	(-)	(-)	(-)	(-)

Source: SFTE “SpetsTechnoExport” data

Appendix G

Structure of selling activities of SFTE “SpetsTechnoExport”

№ of export contracts signed	**Country-recepient**	**Type of weapon delivered**
66	India	Spare parts for torpedo equipment
		Spare parts for marine equipment
		Aviation parts
		Spare parts for air defense systems
		Repair services for aircraft, components
		Special equipment
		Sleeve
9	Algeria	Aviation spare parts
		Services in repair of aviation equipment, units
		Spare parts for radios
		Design documentation
		Aviation units
4	China	Development of pumps
		Development and supply of documentation of the modeling complex
		Engineering services
		Research works
4	Korea	Technical documentation
4	Turkey	Engines
		Completing to anti-tank modules
		Managed weapons
		Active protection complexes

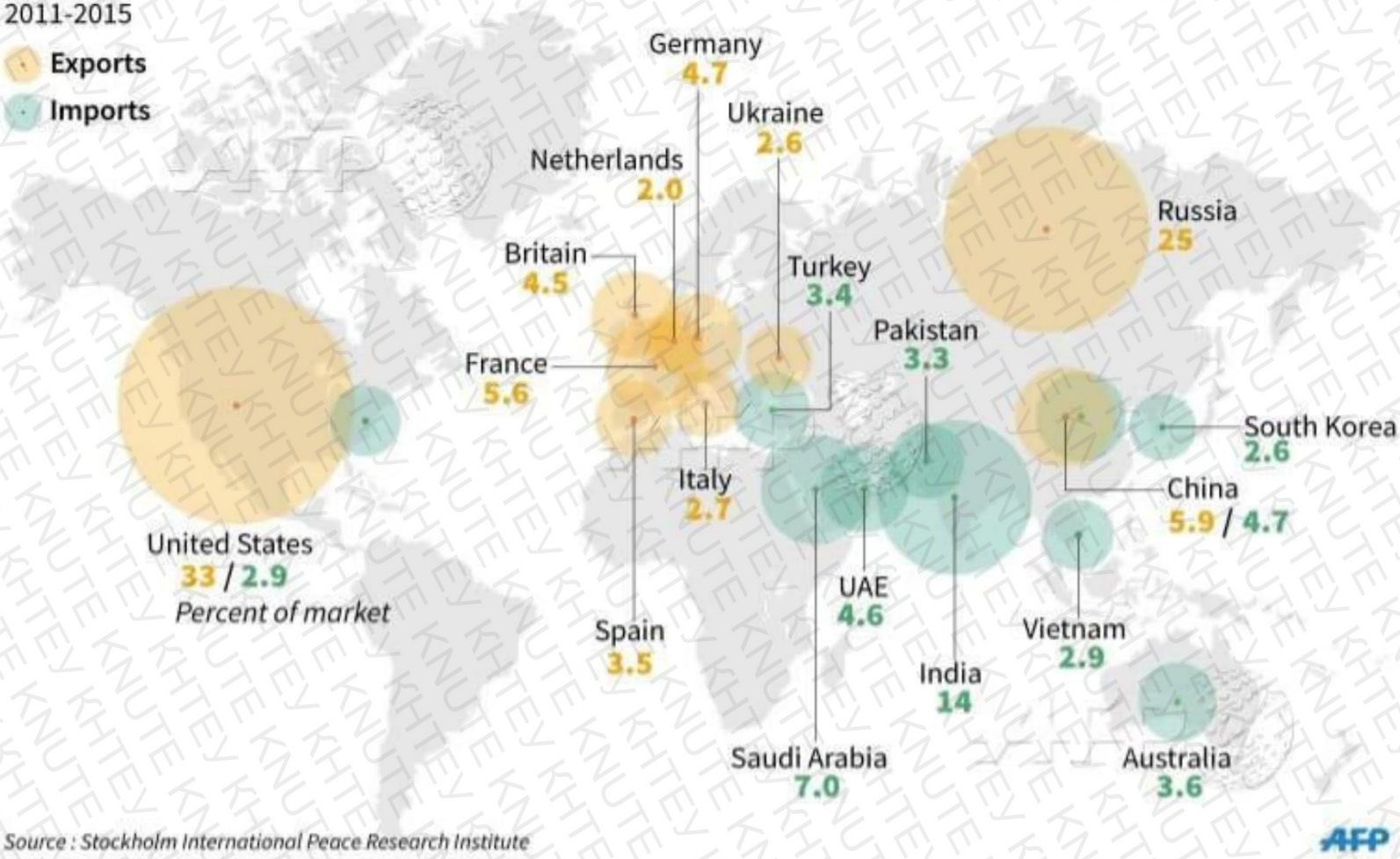
End of Appendix G

3	Saudi Arabia	Anti-tank missile systems
		UAV
		Ammunition
3	Poland	Services in repair of aviation equipment, units
		Warmate products
2	UAE	Supply of rotating circles for BT
		UAV Complex
2	Vietnam	Modernization of aviation
		Service station
2	Czech Republic	Aviation spare parts
		Services in repair of aviation equipment, units
1	Equatorial Guinea	Spare parts for airplanes and helicopters
1	Romania	Spare parts for radar
1	Belarus	AOC products
1	Myanmar	Overhaul services for missle-gun system
1	Israel	Development of units
1	Azerbaijan	Services for revision of air defense systems
1	Indonesia	Ammunition
1	Kazakhstan	Repo repair
1	Gana	Services in repair of aviation equipment, units

Source: SFTE “SpetsTechnoExport” data

World's largest exporters and importers of weapons

2011-2015



Source : Stockholm International Peace Research Institute

AFP

Appendix I

Distribution of markets between departments of SFTE “SpetsTechnoExport”