Katarzyna Zukrowska

The Dilemmas of Polish Arms Industries in the Period of Systemic Changes
THE DILEMMAS OF POLISH ARMS INDUSTRIES
IN THE PERIOD OF SYSTEM CHANGES

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Polish arms industry is struggling for life in the conditions of the decreasing demand for weapons and military equipment. Exports cannot any longer be considered as an escape for Polish arms producers as they have difficulties to face the tough competition on the world market. The bad financial situation of the companies limits their prospects of restructuring the production and switching into the group of suppliers of the civilian market. Moreover, the decline in the economic growth limits their chances to invest in new technologies in two ways: on the one hand enterprises are not able to invest on their own, on the other hand, the tax incomes are not sufficient to finance such changes centrally out of the national budget.

All those difficulties are additionally worsened by the process of adjusting to the new economic environment of the transitional period from a command-distributing system to a market economy in which the arms producers have lost all their privileges they had enjoyed in the past. In practice this means a double shock therapy for the arms producers which considerably diminishes their chances for survival. The low rate of production capacity utilization brings about constraints of the labour force which are rather explosive, especially in the regions where a military plant is the only place providing employment as well as in branches where the crisis is most evident.

The tensed situation in the arms industry can be overcome at least in three ways:
- by speeding up the conversion process;
- by closer cooperation with producers from the Prague-Budapest-Warsaw Triangle and the producers from the NATO countries;
- by adopting high technologies into the production process.

The aim of this paper is to show the scale of the problem and answer, at least partially, what the main obstacles halting the progress in this field are.

I. The Problem of Access to the Information on Military Production

First direct hints about the scale of Polish military expenditures were released in 1984, when it became known that 4% of the national budget is covering the costs of the countries security. At the same time it was revealed that this share is being consequently cut down because of the country’s financial constraints. The real revolution in getting access to the data on the military sector came about in 1989 after the political changes in Poland and other countries of this region.

It was the beginning of a new approach towards all the fields that were considered to be top secret in the past. A then new daily, Gazeta Wyborcza, has published the information about Polish military industries and main companies engaged in the arms production. Soon after this information was followed by vast characteristics of the organization of Polish arms exports. One can consider that those were the first attempts to overcome the old taboos from the past after which other newspapers started to inform about the current state of affairs in the military field. Moreover, gradually the government institutions were releasing information on this touchy issue to all interested parties, also scientists dealing with economic problems of arms production and disarmament.

Currently, the access to all the information and statistical data on military production is rather easy but naturally still limited. The main reasons of incompleteness of this data are:
- security, none of the countries in the world are publishing all the information about their military sector;
- competition, too detailed information can lead to an increase in competition of producers and exporters of similar arms production;
- the fact that the government has not finally decided about the future shape of Polish arms industries. Although the preparatory steps in this field have been already undertaken, the programme of reshaping the industry and the required legislation in this field are still in the stage of preparation.2

Despite all the limitations listed above, the already revealed data in this specific field is rather sufficient for drawing the scale of the problems which are faced by Polish arms producers. They also enable to project the possible ways of overcoming those difficulties, showing the existing drawbacks in this important sector of the economy.

II. Characteristics of Polish Arms Industry

Briefly characterizing the arms industry in Poland one could say that the global share of arms production in the PNB in 1988 was 1.2 % as the value of direct and cooperative deliveries amounted to 6,260 billion zlotys, while the value of global production was estimated at 505,671 billion zlotys. The share of cooperation deliveries in this specific sector of production reached the level of 30 %. The industrial capacities have reached the peak level in 1988, when the total value of the production of military sector was estimated at 3.177 billion $, which was 2.4-2.6 % of the total value of the industrial production. In 1991 the same indicator was lowered by 1/3 and reached the level of 1.022 billion $.

The budget of Ministry of Defence is an additional indicator showing the scale of drop in the military expenditures, part of which is designated to purchases of military equipment and weaponry. In 1988 the Ministry of Defence had 1.422 billion $ to its disposal, whereas in 1991 the amount dropped to the level of 0.3501 billion $. Orders placed by the Ministry of Defence in the 1980's have covered 40-50 % of the military production of Polish arms industries. In the case of some items the demand of MoD was even lower as its share in total value of the production of specific kind of military equipment was closed between 10-15 %. The rest of the production was exported. Since 1989 the MoD has gradually been cutting the orders for new technologies and limited the purchases mainly to the spare parts.

In 1988, 128 enterprises enjoyed a privileged status of arms producing enterprise, giving occupation to 320 thousand of workers, 75 thousand of them were engaged directly in arms production. Recently, the global employment in the Polish military sector is estimated at 120 thousand, however, this figure is changing rapidly as arms producing plants are trimming down their employment figures in the process of adjustment to the new economic conditions. The employment in 30 enterprises being considered important from the Polish security point of view amounts to 40 thousand.

Companies engaged in the arms production were spread over 12 industrial branches and were subordinated to the commands of five ministries: Ministry of Industry - 81, Ministry of Defence -

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2 This will be discussed further in this paper.
24, Ministry of Internal Affairs - 2, Ministry of Transport, Communication and Navigation - 13. Only four of those branches are considered to be of vital importance and four others as significant for the military production, the rest has ony marginal meaning for the arms production.

Polish arms industry has the capacity to produce: operation airplanes, small sea units, helicopters, small transport and training airplanes, tanks T-55 and T-72 (under Soviet licence). Over 80 % of Polish arms production was based on licenses from the former USSR. Production based on Polish designs, training airplanes, advanced optical systems, telecommunication and radio-location systems, hand weaponry and logistic equipment.

The companies operating in Polish arms industry have the potential to supply several hundred of small airplanes, similar amount of helicopters (both equipped in Polish-designed engines or Polish-made ones4), about 350 tanks, 600 vehicles, 1000 crawlers, several hundred of thousands of hand-grenades and several hundred of millions of cartridges. In contemporary conditions their capacities to supply the military market are utilized only to 30 % and if the new trend of decreasing orders continues a further drop in this indicator is to be expected. The pessimism in prognoses of the production values are mainly taking five factors into account: shrinking internal orders, a complete collapse of exports to the former USSR and the falling-off in exports to countries of this region (former WTO countries), increased competition on the world market, declining demand of the importers from the Third World countries5.

A report on arms industry prepared by the consulting company, PROXY, indicates that the technical level of the equipment of Polish arms industries is rather high as far as the machines-tools and the technology is concerned. It also stresses that the employment in arms industry is highly qualified and meets the international standards in this field.

The same report says that the two Polish arms producing companies, GAMRATERG in Jaslo and ERG Bierun in Tychy, can easily be transformed into joint stock companies what can be done by any additional restructuring activities. Also restructurization of four other companies such as DEZAMET, Niewiadow, ORGANIKA ZACHEM and NITRON ERG should not bring about any problems.

MESKO, PRONIT, RADWAR and PCO - as their importance in arms supply of Polish market is out of question - should be transformed into joint stock companies, with 100 % shares belonging to the State Treasury.

III. Polish arms exports and imports

Despite the fact that Poland is a traditional arms exporter since the early fifties, the values of Polish exports of conventional weapons placed the country in the group of dealers of minor importance on the world market. This means that Polish arms exports can be evaluated as far more significant for the Polish economy than for the total balance of the world arms deliveries. Moreover, the importance of arms exports for the economy as a whole seems to increase during the transitional period of the systemic changes when the country was desperately seeking goods that could be placed on the world market and bring about convertible currency.

3 In 1990 the number of arms producing enterprises was cut down to 102, from which 80 worked for the Ministry of Industry, 19 for the Ministry of Defence, 2 for the Ministry of Internal Affairs and 1 for the Ministry of Transport, Communication and Navigation

4 Part of the engines is produced in cooperation with Canadian company Pratt-Whitney for McDonnel Douglas.

Polish arms exports have reached their peak level in 1988 when 40% of total arms production was delivered abroad. The share of arms exports in total Polish exports at that time amounted to 1%. Since then the value of Polish arms exports has been declining considerably and the current information about those specific sales is very pessimistic with regard to the arms suppliers.

According to Polish sources in the period between 1985-1991 Poland has exported arms and military equipment of the total value of 1.62 billion $ and 6.12 billion of roubles.

Alongside with heavy equipment Poland was successfully exporting hand-launched missiles "Strzalka 2M" produced under Soviet licence by Mesko in Skarzysko Kamienna. This factory is working on a new generation of this weaponry. The programme is called "GROM" and the continuation of it requires 10 million dollars. The same factory was supplying the world market with high quality ammunition. It possesses capacities to produce cartridges of different gauges like: 5.45 mm, 5.56 mm, 7.62 mm, 9 mm meeting NATO standards.

Table 1: Value of Polish arms exports in 1984-1989
(in mln. rbl and in mln. dol. in current prices)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>in rbl</td>
<td>924,4</td>
<td>1005,3</td>
<td>1080,1</td>
<td>1131,3</td>
<td>5279,7</td>
<td>992,5</td>
</tr>
<tr>
<td>in $</td>
<td>164,8</td>
<td>118,4</td>
<td>342,1</td>
<td>274,4</td>
<td>258,2</td>
<td>188,3</td>
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</table>

Data obtained from CENZIN - Polish arms dealer

The scale of Polish arms turnover is rather limited. Poland ranks as the third largest exporter among the former Warsaw Pact countries after the Soviet Union and Czechoslovakia. According to SIPRI data showing the leading exporters of major weapons in 1986-90 Poland occupies the ninth place on the list of exporters to the industrialized world (supplies to the Warsaw Pact countries) and is not listed among the 15 suppliers when the exports are aggregated to "all countries": i.e. the developing and developed.

In the eighties 2/3 of Polish arms exports were delivered to the markets of the WTO countries, among which the USSR was the largest importer. In 1990-1991 the values of arms deliveries to those countries have dropped considerably but still they are the main importers of Polish-made special production.

In 1991 - 63% of Polish arms exports was delivered to the countries emerging from the former USSR. The value of those deliveries was estimated at 244,8 mln. $. Further 9% of the exports were delivered to Czechoslovakia, Bulgaria, Romania and Hungary, the total value of exports to those countries reached the level of 33,5 mln. $. The NATO countries have imported Polish weaponry for 56,9 mln. $ (15% of the total deliveries) and the developing countries for 47,7 mln. $ (12%). In the earlier period 80-90% of Polish exports were concentrated on the markets of the WTO countries and remaining 10-20% were sold to the Third World countries. Recently

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7 According to world Military Expenditures and Arms Transfers (ACDA) the value of Polish arms exports have placed this country on the seventh place on the list of world largest exporters in middle of eighties. SIPRI estimates that Poland was beyond the fifteen largest world suppliers.
10 Source as above.
such countries as Angola, Cuba, India, Iran, Libya, South Korea, Nicaragua, Syria and Vietnam were the main importers in this group.

The Polish Ministry of Defence is heavily dependent in its purchases on the arms imports which were concentrated in the former WTO countries. The Soviet Union was the main arms supplier and its share in the total Polish arms imports leaped to 80%. The remaining 20% of arms imports came from Czechoslovakia, Hungary, Yugoslavia, former GDR and Romania.

The surplus which was gained in the arms turnover was utilized to cover the imports of licences, machine-tools and raw materials for the military sector. The most favourable balance of the arms turnover was gained in the period between 1978-1980 and again in 1984, when it amounted to 400-600 million $ per annum. The other years of the last decade were not so successful concerning arms exports as the surplus was much lower. In 1990 this indicator in roubles amounted to 275 million roubles and 50 million $, while in 1991 - 249.2 million $. Recently, the exporters face difficulties in receiving payments for their deliveries to the former USSR. At the beginning of 1992 the indebtedness of Russia, which has taken over all the financial obligations of the former USSR, have reached 1 billion zlotys only for the Polish deliveries of the aircraft equipment.

IV. Legal and institutional changes in the Polish arms trade

The changes in arms trade policy were commenced by instruction of new legal regulations in this field. First steps towards reshaping the arms trade regulations were made in 1988-1990. Decisions undertaken in this period are still binding the exporters, although the authorities are in the process of preparing a new set of legal regulations.

Currently the arms trade regulations are defined by four documents: Bill on economic activities, dated December 23th, 198811; list of the goods and services the transfer of which requires concessions, instruction dated December 21th 1989, published in the Register of Bills No 72/198912; Customs laws, dated December 28th 1989, item 445, introducing requirement of getting licence for imports and exports of goods requiring concession13 and the "negative list" of countries to which the deliveries of military equipment are legally forbidden or limited14.

Until 1990, Polish arms trade was monopolized by a department at the Ministry of Foreign Trade (now Ministry of Foreign Economic Cooperation) - CENZIN15. This monopoly was broken by the decisions made by the former minister, Marcin Święcicki, who has informed in March 1990 that the concession to conduct arms deliveries will be given to some other enterprises. His successors on this post (Minister Ledworsowski from Bielecki's government and A. Głąpinski from current, J. Olszewski's government) have limited their activity in this field to continuation of the decisions undertaken by minister Święcicki.

Currently the number of arms dealers in Poland has increased as over 40 enterprises were granted concessions to conduct arms deliveries, although they do not enjoy the same legal status.

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11 Published in: Dziennik Ustaw Nr 41 z dnia 28 grudnia 1988, pozycja 324, artykuł 11. (Register of Bills of Polish People's Republic No 41, dated 28 December 1988, item 324, article 11).
12 Read: Dziennik Ustaw Nr 72, z 21 grudnia 1989, pozycja 432, (Register of Bills of Polish People's Republic, No 72, dated 21 December 1989, item 432).
14 This list is being prepared and modified by the Ministry of Foreign Affairs. Currently it consists of 14 countries. The total embargo on arms deliveries of Polish equipment is imposed on Afghanistan, Burma, Somalia, Taiwan, Sudan, Mozambique, Salvador. Additionally embargo for deliveries of active weapons are imposed on deliveries to Israel, Iran, Syria and the Republic of South Africa.
15 CENZIN - Centralny Zarząd Inspektorii - Central Engineering Management
Full licence for arms deliveries was granted to CENZIN, CENREX and PHZ BUMAR. All those foreign trade enterprises are joint stock companies, where the majority of shares belongs to the State Treasury. In 1990-1991, those companies have concluded 90-95% of arms deliveries. The remaining deliveries were conducted directly by Polish arms producers who have joined the group of exporters, receiving the concession. Although their activity on the arms exporting market is still marginal, it is worth mentioning that the biggest dealers in this group are NAVIMOR and PZL.

Those changes introduced in the framework of new Polish arms policy had several goals, enough to mention:
- disconnection of arms trade activities from the ministerial structures;
- introduction of competition between exporters by breaking the existing monopoly;
- forming linkages between the producers and the exporters;
- creating conditions for new institutional structures which would be more adequate for market conditions of operation;
- establishing a new control system that would prevent illegal arms deliveries.

V. A Few Words About the Economic Reform in Poland

The arms industries are inseparable from the rest of the economy. Their production is not limited only to the supplies for the military market. Under such circumstances they were affected much harder than civilian producers by the new conditions of production caused by the economic reform and political changes. This fact explains why - when talking about contemporary difficulties of the arms industry - one has to be acquainted with the general state of affairs in the Polish economy.

In 1991, Leszek Balcerowicz launched a programme of economic changes based on general IMF recommendations to stabilize the market. In case of Poland, the programme could not be limited only to stabilization but also it was supposed to create market mechanisms with all tools and institutions allowing a functioning market economy. The programme was aimed at:
- reaching macrostabilization;
- setting up a social security net;
- small scale privatisation (retail trade, services and small manufacturing business) and development of the private sector;
- branch restructuring and privatisation on a large scale;
- establishment of automatic banking system;
- establishment of different financial markets.

The two years of the economic reform in Poland brought about some essential changes of the economic environment in which producers have to operate. It becomes clear that although some elements of the reform have brought visible results, especially such as changes in the proportions between the supply and demand on the market, the others have not brought about the expected miracles.

Moreover, economista found out that the prescription for stabilization in the transitional period from one system to another is destroying the national output and pushing the economy into deep recession with high unemployment rates, decreasing production, low productivity rates and high prices. The victory over inflation seems to be temporary as the low level of wages is effectively limiting the demand which in addition to growing competition of imported goods is killing the weak infant industries. It is rather difficult to talk about the accuracy of figures showing the scale of the recession as they underestimate the private business; however, it is rather clear that Poland is not an exception and all the countries in East Central Europe are in an economic trauma. It is
worth mentioning here that recent publications on South American countries also indicate that the IMF programme did not develop there according to the expectations16.

The performance of Polish economy at the end of 1991 was dramatically poor. The industrial production was about 40% the rate of 1989, the investment rate is increasingly low, the unemployment rate in some of the regions of the country is alarmingly high (20%), the national budget is facing an unexpectedly high deficit caused by low tax-incomes, finances of science, education, culture and health are insufficient to cover the essential needs of the country17.

According to the survey presented by The Economist18 the situation in Poland is as follows:

The "big bang" reform of the Polish economy covered elimination of most price controls, introduction of convertibility of the currency and lowering the trade barriers. Fuelled by sale or lease of about 60,000 state shops, the private sector was rapidly growing in 1991, bringing in as much as 40% of the GDP. Nearly 2/3 of private business are to be found in the retailing, distribution and transport sector. Most restrictions on foreign investment have been abolished. Warsaw stock exchange began weekly trading in April. Privatisation is being pursued through liquidations, management buy-outs, joint ventures and sales to foreigners, but is progressing more slowly than expected. The main reason for that is the lack of capital and high interest rates (reaching 80%). To speed it up a mass-privatisation scheme has been announced but it has not been put into action until now.

In April 1991 Western governments agreed to a gradual write-off of 50% of Poland’s 33 billion of government-to-government debt. The same month the IMF agreed to provide a 1.7 billion $ adjustment loan, though Poland will fail to fulfill many of the conditions attached to the loan and is asking the IMF to relax them. Despite continuing inflation, surpassing the level of 80% in 1991 instead of the hoped-for 36%, the government has been under intense domestic pressure to ease monetary restrictions and allow bigger wage rises in state-owned companies. The government’s budget is out of control and critics regularly accuse it of leading the country towards general economic collapse.

It seems that the major mistake in the economic reform stems from the fact that economists responsible for the changes in this field wanted to sweep the old system away as fast as possible without considering any other option like, for instance, a gradual shift with active intervention measures19. The main reasons for that were the lack of alternative economic programmes, absence of democratic political experience and weak political structures20.

The experience from the past two years have divided economists into three groups:  
- supporting the programme and calling for constant continuation of the steps undertaken by Balcerowicz;  
- attacking the programme and demanding a considerable shift in the economic policy;  
- analyzing the situation and looking for general solutions easing the social tensions and trying to lift the burdens of the transitional period.

17 Z. Sobiski, Trzy duze poprawki, Polityka 18, 01, 1991 s. 5.
Generally speaking, most of the economists support the direction of changes as there is no other way for the future development of the country than further democratization of political life and of the economy. At the same time however they stress that methods to reshape the economy employed for the last two years are insufficient and dangerous. First of all, these economists want to put an end to action choking the state enterprises as without them it will be difficult to keep the employment rate on a socially safe level. Secondly, they see the need to stop the trimming of budget expenditures. Although they agree that in the long run the budget must be balanced but this is the question for the future. In the present conditions it is impossible to balance the budget with the methods that lead to its further imbalance as it has recently been done in Poland.

Moreover, these economists also advocate the protection of the home market against excessive imports. It is true that imports increase the supply on the market and help to intensify the competition. It is out of question that this tool should be actively utilized in both cases but to a certain limit, defined by national interests of the country. First of all, Polish industry was not prepared for such a wide opening of the market as it experienced in the past two years. Secondly, market protection can attract direct foreign investments. Thirdly, stimulation of production requires protection from strong and aggressive competitors. Fourthly, decrease of production, limited possibilities of adjustment to new conditions of functioning lead usually to bankruptcy and low performance is univocal with underestimated value of the factory. It means a low price for the buyer and limited transfer to the budget.

VI. Main Problems of the Polish arms Industry in the Transition Period

In parallel with the common and universal problems occurring in all factories that are trying to reshape and reorganize their production lines in order to meet the requirements of the civilian market as their traditional one is shrinking drastically - Polish military industry had to face additionally:
- the losses of export contracts worth of 75 million $, caused by the embargo introduced for arms deliveries to Iraq and Yugoslavia;
- losses caused by lack of financial liquidity of the buyers (Ministry of Interior Affairs, and other non-ministerial contractors);
- absence of clear guide-lines in the policy towards the industry;
- hesitations in formulating a new defence doctrine, which can determine the new needs of the army.

The government tried to work out an organizational framework for future work of the arms producers and hired with this aim in mind a consulting company from Cracow, called PROXY. According to the information given by the military, PROXY turned often to be incompetent and inadequate from the strategic as well as economic and technological point of view. One cannot prepare any serious plan of this kind without consulting politicians, the military sector and civilians in the Ministry. Moreover, existing plants create some unchangeable conditions for the production and therefore a planner cannot prepare a programme of reorganization of the industry in which those parameters are omitted. Similar thing can be said about the hitherto equipment of the army which cannot be swept away over night especially when the financial resources are very scarce. It is clear that needs are tremendous both in the industry and in the army, but in the light of limited capital they will have to be postponed for a long time.

Some of the problems that have to be faced by the arms industries (like export constraints, difficulties in regaining export payments or changing export conditions) have already been discussed but international conditions should be considered as only one side of the coin. The
second one is even a more complex one as it embraces a full set of conditions that have to be faced at the national level.

The Polish arms industry has to find its way in a new completely unfriendly environment, which brings about:
- cancellations of donations from the budget;
- cuts of orders coming from the MoD
- shrinking export markets;
- decoupling of cooperation links;
- high costs of credits;
- increased competition;
- necessity to establish new contacts for cooperation, licensing, high technologies and exports;
- necessity to work out a strategy leading towards at least partial emancipation;
- restructuring of the production (diversification) and seeking possibilities to cut down the costs.

Generally speaking the existence of arms industries in Poland would be a lot easier if necessary political decisions would have been taken.

a) View from the Top: the Governmental Level

At the beginning of 1990 the Office of Central Planning, advised by the Economic Committee of the Board of Ministers - started to work out a new financial and legislative formula for the arms producing plants. It has lead to the cancellation of most of the privileges for the military industry. In that phase of reshaping the arms industry - investments, R & D and exports to the Soviet sphere of influence were donated from the budget.

Most of those donations were gradually abolished in accordance with further political changes in Poland and in the whole block of countries belonging to East Central Europe as well as were also forced by growing difficulties in balancing the national budget. Although it is an important and burning issue the formulation of guide-lines for military industry has not been completed until now (May 1992). Moreover, shrinking national budget and reduced military expenditures seriously undermine the economic position of arms producing plants. They can neither produce the military equipment nor can they convert their traditional production into a civilian one. Their future is determined by political decision regarding what and how should be produced in the country, what should be imported, what should be done in cooperation and what under licence and whose? Those questions are still left unanswered and this prolongs the agony of uncertainty about the future of factories which have the promise that after two difficult years they will not be left without governmental help.

Table 2 Polish Military expenditures in current prices

<table>
<thead>
<tr>
<th>year</th>
<th>value in billion zlotys</th>
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<tbody>
<tr>
<td>1989</td>
<td>1,954</td>
</tr>
<tr>
<td>1990</td>
<td>10,1</td>
</tr>
<tr>
<td>1991</td>
<td>23,3 (planned but revised)</td>
</tr>
<tr>
<td>1992</td>
<td>5,028 (planned in preliminary budget)</td>
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21 P. Wieczorek, Polski przemysł obronny w latach osiemdziesiątych, PISM 1990, s. 9.
Within those global figures the purchases are falling down drastically, similarly as the expenditures on new technologies and research and development. In 1991 the planned purchases of equipment valued 5.1 billion zlotys and in reality it dropped to 2.8 billion.22

In November 1991, Henryka Bochniarz, former Minister of Industry and Trade in the Jan K. Bielecki government has announced that the main shape of the plan for military industry has finally been worked out and in many points it resembles the programme of the pre-war period. Several arms industry plants will be given the status of National Armament Enterprises. Minister Bochniarz did not give further details on this topic, although it was rather clear that plants gaining this status could count on governmental orders and in their exports they would enjoy governmental guarantees.

Journalists present on the meeting with Minister Bochniarz were informed that the list of National Armament Enterprises consists of 19 companies, eight belonging to the Ministry of Industry and eleven to the Ministry of Defence. Names of the first eight were announced. They include: Bumar Lądek, Radom Metal Plant Łucznik, Electronic Plant Radwar - in Warsaw, Metal Plant Mesko - in Skarżysko Kamienna, Fromit - in Pionki, Gamrag-Erg - Jaslo (artificial fibres), Mechanical Plant in Tarnow and Precision Instruments Plant in Niewiadow.

Minister Bochniarz also presented a list of 24 companies which in the future can be transformed into joint stock companies with majority shares held by the State Treasury. This list consisted of 8 factories of airplane industry, Stalow Wola Still Mill and Ball-bearing works in Krasnik, all of them with small share (about 8%) of military production. It was announced that the first list should be considered as a final document, the second one can be changed.

It was announced in January 1991 that the previously presented solution for the military industry was not the final one. Altogether 92 factories would be divided into three groups, but the final decision about who would be in which group has not been undertaken. The producers from the first group (the number of plants varied in different projects from 22 to 10) - according to plans - would receive guaranteed orders from the government. Similarly to the project presented by Minister Bochniarz, the second group would consist of 30 joint stock companies with the majority of shares belonging to the National Treasury. The rest of the companies would be guided by the market rules of supply and demand what in fact will lead to reorientation of their production.

At the beginning of May 1992 the situation of Polish arms producers has been still unsolved. Although the workers stopped to strike,25 they did not resign from their demands towards the government. The results of negotiations with the government indicate that:
- the government is interested in the survival of part of the industry but some of the plants have to be closed down;
- most of the companies have to find their own strategies to survive
- the government is seeking foreign cooperants but most of the western producers are interested in selling their products not establishing production ties.

24 Please note that in each statement the number of arms producing companies is different what can be considered as a reflection of changes in the supply side, but also can be interpreted as an indicator of total chaos on the market.
25 Workers have used a full range of all kind of protest: beginning from sit-down strikes (Rzeszow, Swidnik, Wroclaw), rotation-strikes (whole airplane producing brach), hunger-strikes, demonstrations and pickets. They also negotiated with the government representatives. Now they are awaiting decisions. The situation is especially tough in the airplane producing plants, which were heavily dependent (80%) on former Soviet market.
Deputy Minister of Industry and Trade, Stanislaw Padykula, has informed in April that about 16 of airplane producing plants will be closed and the rest of the branch has to find a strategy for the future on its own.\textsuperscript{26}

13th of May brought some meaningful decisions about the future of the Polish arms industry. The Social and Economic committee of the Ministerial Board has decided that the core of the arms production in Poland will consist of 38 enterprises. Eleven of them will keep their state status and they will be subordinated to the Ministry of Defence. Ten of them will change their legal status into joint stock companies owned by the State Treasury. The rest of the group will also become joint stock companies, admitting private and foreign investments but the majority of shares would be controlled by the State Treasury.\textsuperscript{27}

\textit{b) Situation at the Bottom: company level}

Up to now the arms producing plants had to decide on the survival policy in the transitional period for themselves. It was a real shock therapy for them as they had to learn how to function in diametrically changed conditions, trying at the same time to acquire a new technology for the production, dealing with payment deficit, often being on the verge of bankruptcy. This hard lesson was artificially sweetened by pure rhetoric declarations voiced by the government, not followed, however, by any practical moves. They were limited to promises that "help is coming", "they won't be left to themselves" and that "their survival lies in the national interest" ... Easier said than done! And natural elimination from the market does not always mean that the proper producers have survived and those not needed any more have been wiped off.

The financial situation of arms producers is very difficult. A comparative study prepared by a consulting company shows that the average current ratio of liquidity assets in 1990 was 1.66 and in 1991 - 1.76. But the average high current ratio has increased at that time from 0.69 to 0.83. As the first indicator could be interpreted as a proof of the rather good condition of the arms producing companies, a comparison of both indicators shows a great increase in stocks of finished goods in this specific sector of industry.\textsuperscript{28}

Moreover, if we add a negative cash-flow indicator to this information - which reached the level of -1.4 billion zlotys in 9 months of 1991 - the picture of the financial situation of the arms producers becomes rather clear.\textsuperscript{29}

Most of the arms producers do not know how to react to the signals coming from the market. And if they do understand the signals, they do not have the capacity to react. Very often the machine-tools with which they are equipped are outdated and not flexible enough to undertake a new type of production.

Only few arms producers were able to introduce some marketing into their new economic strategy. RADWAR, Labedy and Przemysłowe Centrum Optyki (Industrial Optical Centre) can be considered as first and successful guinea-pigs in this field. Other companies simply do not have trained specialists to conduct marketing in this specific and complex field.

It is difficult to call a deposit of 200 billion zlotys, given by the Ministry of Defence from its current expenditures to a tank producing factory in Labedy for their exports abandoned because of the war in the Persian Gulf, a government intervention measure. That amount of money did not...

\begin{footnotesize}
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\item[] \textsuperscript{26} P. Tomczyk, Niskie Iony. Niekonczaca sie niepewnosci przemyslu lotniczego. Rzeczpospolita, 13 May 1992, p. 1.
\item[] \textsuperscript{27} Obradowal KSERM. Zbrojenia do prywatyzacji. Rzeczpospolita, 14 May 1992. Ekonomika i Prawo, p. I.
\item[] \textsuperscript{28} J. Zareba, Przyszlosc sektora obronnego, Gazeta Bankowa, No 7, 16-22 February 1992, p. 16.
\end{itemize}
\end{footnotesize}
reach in time an account of another supplier of the Defence Ministry and it was the cause of its financial perturbations. At the beginning of 1992 the Ministry of Defence owes to the banks, producers or exports about 1.1 billion of zlotys for unpaid deliveries with increasing charges and interests. Needless to say, this amount is 20% of the preliminary defence budget that was accepted for this year.

Some of the producers were able to survive in those new and rather confused conditions of functioning but others are in very bad financial conditions, and will have to declare insolvency, going through the whole bankruptcy procedure. The Ministry of Defence is rather pessimistic about future orders placed with the industry. Limited financial resources will barely cover the debts, maintenance and personal expenditures. In other words the military industry will be left without any new orders.

Opinions like this do not only come from the Ministry of Defence, but also from the Ministry of Industry and Trade. Under these circumstances, bankruptcy becomes a reality. It will be declared by Metal Plant in Radom, Warsaw’s Radwar Factory as both of them do not have the money to pay the wages of the labour-force. In Metal Plant Mesko the energy supply will be cut down as the bills have not been paid for several months. This same factory owes 1051 million of zlotys to its cooperator - a Nitrogen Producer from Tarnow-Moscice.

The situation in the defence industry has become very difficult by the end of 1991 and employees organized in Workers’ Union declared a strike of 50 enterprises of defence, airplane, chemical and naval industries. The workers demanded a higher budget for Defence, so the Ministry could return all the debts to producers which have reached at the beginning of 1992 the level of 300 billion zlotys without the interest rates. In the new provisional budget the value of purchases of the new equipment is to amount to 250 billion zlotys. It does not even cover the debts drawn from the industry in the previous year.

The next demand is concerning the problem of arms transfers to the republics of the former Soviet Union. The strikers demanded that the government should grant a technical credit for deliveries placed on the market of Polish eastern neighbours which would enable exports before the barter agreement was signed. Additionally, there are demands for special loans granted to the industry in order to recompensate temporary difficulties caused by unpaid deliveries concluded in 1991 amounts to 161.7 million $ and it appears to be only half of the contracted deliveries for that year as the total value of Polish deliveries for the Soviet market amounted to 340 million $.

The workers applied for a quick decision in restructuring the arms industry as despite the difficulties on the national market - producers have to face a 40% drop in arms exports after the Warsaw Treaty Organization was dissolved. They also required some alternations in the ‘Negative List of Weaponry Importers’. They accepted the embargo for exports to Yugoslavia and Iraq, but they do not know why such a list also encompasses countries not discriminated by other exporters. Striking workers wonder why they should keep their production piled in the stocks, which is a costly solution for them, while there are other countries willing to pay for their products?

The striking workers also demanded that the government should overtake the burden of maintenance of the unutilized industrial capacities which are kept in full readiness in case of a military conflict. The costs of this maintenance amounted to 2.2 billion zlotys and are covered by arms producing enterprises.

29 Ibidem.
The military industry gives employees 2-3 % of the Polish labour-force. Very often arms producing factories are the only plants in small towns which can provide the market in relatively substantial number of work places for its citizens. In the condition of capital deficit and increasing unemployment, people working here are trying to save their own posts which does not necessarily mean that they are against conversion or anti-pacifists. The problem is similar all over the world and does not require further comments. It is no doubt more complicated than just pure conversion as is overwhelming the number of issues and their scale with which the manager has to deal simultaneously.

The military Electronic Plant in Zielonka has been repairing for nearly 40 years the land-radiolocation systems. Not long ago, this was a unique specialization within the Warsaw Treaty Organization and thus offered good and stable jobs for 500 people. At present the situation is not very easy but it is far from dramatic. Although this plant experienced some financial difficulties regarding the turnover with its cooperators it has, on the other hand, enough orders followed by payments which enabled an increase in the salaries and purchase of new electronic equipment. The two sources that provided the money were the Ministry of Defence and the Arab countries. The Ministry had only 2-3 weeks of delays in the deliveries, while the Arab countries, namely Libya and Iraq have paid huge amounts of convertible currency as they signed a big contract for deliveries of radiolocation systems which have gone through a check-up this year. It is the result of planning and pure chance. The director of the factory is an optimist and says that if the demand from the Ministry would be higher he could hire another 500 workers. All his employees are highly skilled and qualified and they want to keep the job and the manager as he has succeeded to increase their salaries in the difficult transitional period.

This is no unique example of adjustments to the new production conditions. There are several others but in those other cases it is rather diversification of the production and utilization of the free capacities which can bring about production for the civilian market. Such a process can be exemplified by most of the factories listed above with a noticeable share of civilian production. Those examples are not discussed thoroughly as the slow down in the economic performance is covering all other small and positive aspects of changes. And as usual each coin has two sides ...

VII. The Problem of Conversion and Restructuring

According to the information from the Ministry of Industry and Trade the national programme of conversion has been prepared and approved by the military. Now it needs to be accepted by the Board of Ministers.

The two difficult years of struggling have brought about some information on arms producers that was used afterwards to point out those who are able to survive in the market conditions. 33 enterprises from the total number of 80 can be considered as important from the point of view of Polish security. The share of military production in those enterprises is closing between 1-60 %.

In one of the scenarios arms producers were divided into three groups:
- **group A** consists of 8 enterprises, which indicate a gain of 3 %. Their share in total arms sales is 26 %. Those enterprises give the best prospects for survival in the market conditions, reacting to the signals coming from the market. Those enterprises show a negative cash flow indicator, which is linked with their tax obligations. The total value of those obligations amounts to 300 billion zlotys.

- **group B** consists of 17 enterprises, which indicate losses lower than 5% or even a bit higher but with better economic results of their activities in 1990. Those enterprises supply 51% of total sales of arms industries.

- **group C** consists of 8 enterprises. Their military production should be separated and enterprises should be closed down. They supply 26% of the global value of sales on the military market.

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<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>2662</td>
<td>5215</td>
<td>2352</td>
</tr>
<tr>
<td><strong>Losses</strong></td>
<td>372</td>
<td>488</td>
<td>603</td>
</tr>
<tr>
<td><strong>Cash-flow</strong></td>
<td>-319</td>
<td>-933</td>
<td>-136</td>
</tr>
</tbody>
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**Table 3: Effects of Economic Activity of Polish Arms Producers in billion zlotys (9 months in 1990)**

PROXY showing three ways to deal with the arms producers in Poland: a null method, minimum method and a complex approach. The first solution would mean lack of any intervention from the side of the government. The second one would lead to intervention in the enterprises, which belong to group B. The third one gives a longlasting strategy in reshaping the structure of arms industries in Poland, creating a set of holdings which would operate according to the Polish Trade Code.

As PROXY suggests to choose between the second and third solution it seems worthwhile to look at them a bit closer. According to the second scenario the restructuring of the arms industry would be mainly concentrated on the enterprises itself and not on the whole military sector. This solution will require a cut down in production capacities by 30%. The total cost of such an approach to restructuring of the arms industries amounts to 500 billion zlotys together with group labour release but excluding accompanying costs like recultivation of the land).

This program calls for a new status of the arms producing enterprises. First of all those companies have to be transformed into joint stock companies owned at the beginning by the State Treasury. This step would enable them to make further flexible decisions about their future ownership. Organs that would play the role of the owner (The Ministerial Board or Ministry of Industry and Trade) would have the right to:
- divide or merge the companies;
- decide about sales of the stock;
- decide about the secondary emission of the stock in order to finance the restructuring of the company.

The third solution gives the best financial status to the enterprises. Accordingly, holdings created in the framework of arms producers would possess both the capacity and right to produce and export civilian and military goods. They would have the right to establish foreign financial links and the capital concentration would enable them to conduct their own R & D increasing the competitiveness of their products. The state control would be limited to the statute organs and only in case of most important companies 100% of shares would be owned by the government.

At least three main holdings can be easily created by the specialized groups of arms producers:
- MESKO (a missile and ammunition holding), consisting of: Zaklady Metalowe MESKO Skarzysko-Kamienna, DEZAMET Nowa Dęba, ORGANIA-ZACHEM Bydgoszcz, ERG tychy, NITRON ERG Krupski Mlyn, PRESTA Niewiadow, PRONIT Pionki and GAMRATERG Jasło,
- LABEDY (automobile and armour holding): BUMAR Labedy, ZM Tarnow, SHL kielce, PZO Warszawa, ZP DJORA Dzierzoniow, steelmill BATORY and CZESTOCHOWA.

The restructuring of the arms industry - if one of the two active methods chosen - should be carried out in three phases:
- first, choosing the strategy for the future;
- second, working out the business plan of restructuring;
- third, fulfilment of the plan.

Currently most of the arms producers - with few exception of fully successful enterprises - are not able to proceed to the second phase of restructuring what is directly linked with lack of financial possibilities to order a business plan.

The government is not applying a central plan for adjustments of the labour force, which is released from the factories (also the arms factories) but it supplies money to regional programmes of this kind. The total amount of money used for those purposes is increasing considerably. In 1990 those expenditures amounted to 3.702 billion of zlotys, in 1991 - 13.584 billion and in 1992 it is planned that this figure will reach the level of 22.465 billion zlotys³³.

The effectiveness of using this money is rather high as about 50 % of retrained labour force has found a new job. The problem of restructuralization of the labour force in Poland and the question of employment is solved legally in the following document: Ustawa o zatrudnieniu i bezrobociu (Bill about employment and unemployment, dated 16 October 1991) which is supplemented by Bill No 106, dated 20 November 1991 and Bill No 122/1992. Those document define the legal background of releasing labour, introduces the policy of allowances and the problem of low credit loans to start a small business.

Generally one cannot find any correlation between the geography of increased unemployment and the geography of concentration of the arms industry. This can be explained by the fact that high unemployment rates are concentrated in the regions of underdeveloped infrastructure and traditionally the arms industries are located in bigger agglomerations with rather developed infrastructure³⁴.

Moreover, the period of systematic changes is indicating that the institutional bureaucratic behaviour is much less flexible in comparison to the elasticity of the human factor. In other words despite all the difficulties labour force is finding occupation easier than it would result purely from the intervention measures undertaken by local or central authorities. This finding does not imply that the intervention in this field is not necessary but it shows that it is overbureaucratized.

VIII. Conclusions

There are at least two dimensions of the problems of military industry in Poland the first is a national one, the second an international one.

Basic arms procurement in Poland is far from self-sufficiency but it can cover a meaningful part of the demand of the MoD. The situation of arms producing enterprises is very difficult and it

³³ Information from the Ministry of Labour (May 1992)
³⁴ Rynek Pracy, Miesiecznik Ministerstwa Pracy in Poczty Socjalnej, No 4, April 1992.
requires political decisions accepting the programme to restructure the military sector, solving the question of R & D and cooperation patterns.

It is out of question that the military industry of Czechoslovakia, Hungary and Poland have conditions for cooperation in this field. All of them are facing similar problems of restructuring the industry, they want emancipation and have similar technical roots of the production ie. the Soviet licensing. Moreover, their production seems to complementary. Despite all this, if even they come to an agreement to cooperate, they would have to look for new partners from the Western countries.

It seems that countries from East Central Europe want to restructure their arms industries following the pattern from the past which brought about self-sufficiency in most of the Western countries. They did not realize that Western countries are applying a new cooperative model to their arms industries. The contemporary situation is the best one to take solutions in this field especially when restructuring and conversion conducted in the conditions of difficult money. One can ask here a question, which will be left unanswered: can those countries reach the golden mean of international security combining national problems of security, arms production, international cooperation in arms production and competition in the arms exports? Without political decisions in this field this tense and rather complex problem will be left unsolved.