

ДЖЕРЕЛА КОНКУРЕНТНИХ ПЕРЕВАГ ВИРОБНИКІВ ГІРНИЧО-ВИДОБУВНОГО ОБЛАДНАННЯ НА МІЖНАРОДНИХ РИНКАХ: РЕЗУЛЬТАТИ ОПИТУВАННЯ

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Метою дослідження є визначення джерел конкурентних переваг польських виробників гірничо-видобувного обладнання на міжнародних ринках. Для її досягнення у теоретичній частині статті проаналізовано літературні джерела з питань конкурентоспроможності підприємств, а у практичній частині подано результати опитування, проведеного у 2012 році серед польських виробників гірничо-видобувного обладнання.

Ключові слова: виробництво гірничо-видобувного обладнання, конкурентні переваги.

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SOURCES OF COMPETITIVE ADVANTAGE OF PRODUCERS OF MINING MACHINES AND APPLIANCES ON THE INTERNATIONAL MARKETS: RESULTS OF QUESTIONNAIRE RESEARCH

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The purpose of the conducted considerations and research is to identify the sources of competitive advantage of Polish producers of mining machines and appliances on the international markets. In order to achieve the objective formulated in such way, in the theoretical part of the article there are literature studies presented concerning competitiveness of enterprises and in the practical part there are results of questionnaire research described, carried out in 2012 among the Polish producers of mining machines and appliances.

Key words: industry of mining machines and appliances, competitive advantage.

Problem statement. Competitiveness is a notion interpreted in an intuitive way but it is hard to define. Competitiveness is an ability of enterprise to take competitive struggle [1] [2]. This ability in a short time allows the enterprise to gain advantage over its rivals, and in a long-term it guarantees survival [3] [4]. According to the above, it is a feature which allows the enterprise to be better than the competition.

Analysis of the recent research and publications. The notion of competitiveness is connected with a definition of competitive advantage which means possessing distinguishing features by the enterprise [5]. Due to such features the enterprise gains advantage over other enterprises. Consequently, these are the sources of competitive advantage. The factors influencing on enterprise's competitiveness may be divided

into three groups: microeconomic, mezeconomic and macroeconomic [6] [7]. The first group includes: competitive position in the past, competitive potential [8] and corporate competitive strategy [9]. The second group consists of: possessing resources, demand factors, conditions of organization creation and enterprise management as well as rules of industry functioning. In the last group there are: size of natural resources, effectiveness of resources usage, social-economic system, political system and international economic environment [10].

In literature, assessment of enterprise competitive position is conducted in various approaches. In the hereby work, there is a methodology suggested elaborated by Z. Pierścionek, which is indicated by three subsequent stages:

1. ratio analysis of competitive position oriented on determination of existence of competitive advantage and assessment of its size,
2. identification of determinants of competitive advantage,
3. analysis of indirect factors [11].

Competitive position is defined by determination of enterprise's share in the market and its financial situation. Next, there are determinants of competitive advantage identified and these include: product quality and novelty, price, sales and service system as well as corporate image. In the third stage there are indirect factors analyzed, such as: production technology and organization, quality of human resources and management system [12] [13].

Formulation of objectives. The purpose of the conducted considerations and research is to identify the sources of competitive advantage of Polish producers of mining machines and appliances on the international markets.

The main material. The research instrument was a questionnaire prepared according to the research sequences presented in figure 1.

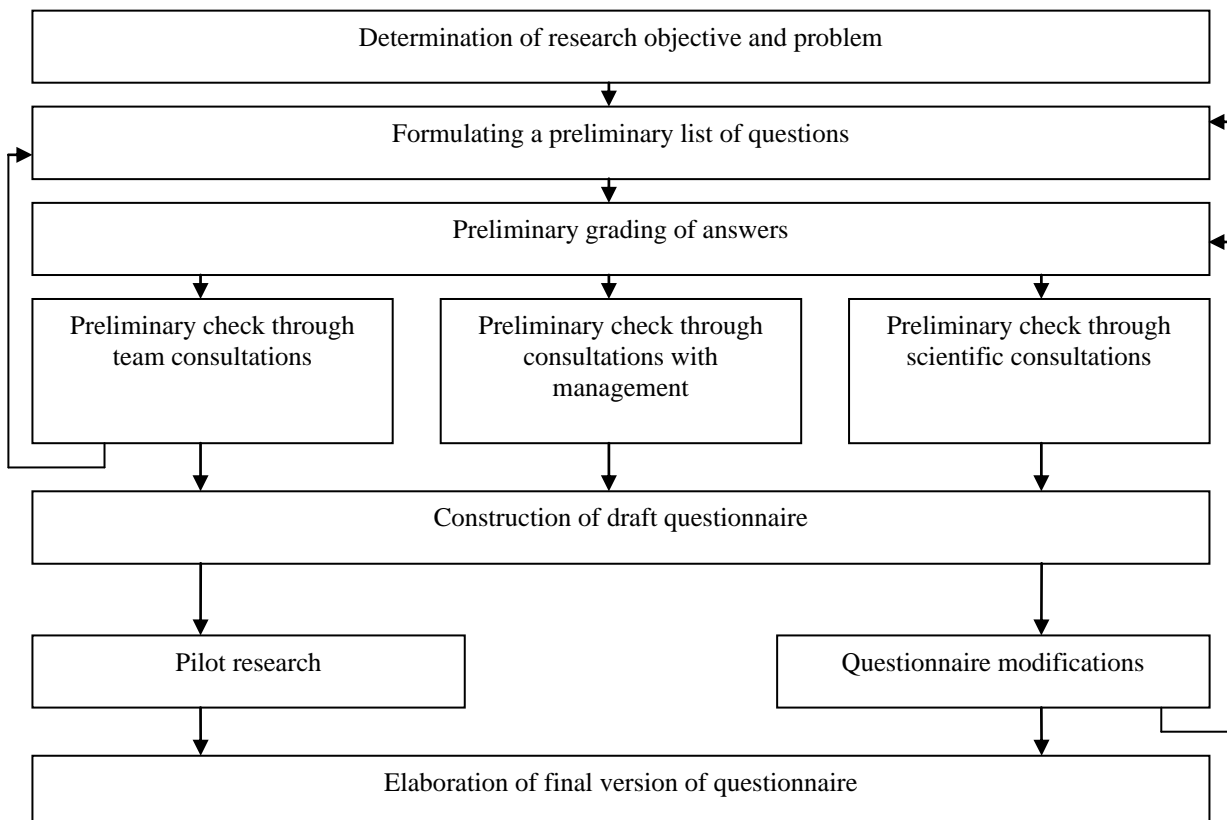


Figure 1. Stages of building a questionnaire

Source: own work based on: [14]

Having considered the scale of the problem of research conducted, the research was divided into five parts. In each of them there was a research objective defined. In a chronological order, they are presented as follows:

1. Determination of directions of current and potential export along with its size and conditions of competitive character.
2. Analysis and assessment of product offer and degree of its suitability in terms of foreign market requirements.
3. Assessment of internal barriers embedded in the inside of Polish enterprises and in their domestic political, economic, social and technological environment.
4. Identification and assessment of external barrier limiting export of mining machines and appliances, stemming from the conditions of importer's market.
5. Assessment of image of Polish brands in target countries.

In the hereby article, due to a limitation by the range of the topic and contents, there are the results presented concerning the first and fifth part of the questionnaire research. Selection of the research sample began with compiling a list of enterprises cooperating with the hard coal mining in Poland. The list consisted of 214 enterprises. There were 40 subjects distinguished among these enterprises that provide mining machines and appliances for the Polish mining industry. 14 enterprises took part in the questionnaire research which constitute the core of the industry, including the enterprises being the leaders.

In the first question the surveyed enterprise were asked to characterize the main directions of export (countries) by indicating them and determining the length of the period of existing cooperation as well as the quantity and value of contracts concluded in the last three years. The enterprises identified 24 countries, at which the export of mining machines and equipment was aimed. These are: Argentina, Austria, Australia, Bosnia, Belarus, Bulgaria, China, Czech Republic, Finland, Spain, The Netherlands, Kazakhstan, Colombia, Lithuania, Mexico, Morocco, Germany, South Africa, Russia, Romania, Serbia, Ukraine, United Kingdom and Vietnam. On the list above there are both countries that are giants on the market of mining mineral resources, as well as countries that have a lower mining potential, such as Bosnia, Romania or Serbia. The list encompasses all continents but most of the target markets are located in Europe. Among the seven identified markets with high export potential (Argentina, Chile, China, India, Kazakhstan, Russia, Vietnam) the examined enterprises have already been carrying trade. These are: Argentina, China, Kazakhstan, Russia and Vietnam. The existing cooperation may provide a foothold for further development of export and makes it possible to learn about a given market of mining machines for those enterprises that have not explored it yet. Chile and India however are not on the list. For the examined enterprises these would be entirely new markets, absorbent and promising, but burdened with risk of incomplete identification of economic and legislative conditions.

Some of the examined enterprises exported goods to several of the listed twenty-four countries. Therefore, it is important to identify the most popular directions of sales.

According to the results of the research, the most popular markets are Germany, Russia, Ukraine and Czech Republic. Only one or two enterprises from the examined group carries out trade exchange with other countries.

In the analyzed question, the representatives of the enterprises were also asked to describe the length of the cooperation with a given country. Cooperation of over twenty years was declared with the following countries: Bosnia, Bulgaria, China, Czech Republic, Germany, Russia, Serbia, Great Britain and Ukraine. Trade has been conducted with Spain for fifteen years. Cooperation lasting between five and ten years characterizes such markets as: Belarus, Columbia and Mexico. To other countries export has been directed for less than five years. Therefore, for the examined enterprises these are the new markets in the early stage of penetration. Four other questions referred to the international competitive environment of the enterprises from the industry of mining machines and appliances. Two of them were of general character, two were complex open questions.

The first of the general questions concerned the identification of main domestic competitors on the export markets of the examined enterprises. The industry leaders were identified the largest number of

times. The following enterprises were considered as the most dangerous: Famur JSC., Fasing JSC., Kopex JSC., Bumech JSC., Wolbrom JSC. and Wonam JSC. The leaders pointed at each other in the research.

The tycoons of the global industry, i. e. such enterprises as Bucyrus (currently in the Caterpillar structure) and Joy Global were considered to be the most dangerous global competitors. Among the identifications the Emeco concern has not appeared, probably due to the fact that it is a manufacturer of equipment for open pit mines, while the majority of the surveyed provides equipment of underground mining. The following have also been considered as significant competitors on the target markets:

- ✓ Bartec Group – German manufacturer of industrial technologies in the area of security for the use of zones exposed to risk of explosions,
- ✓ Breuer-Motoren GmbH & Co. KG Elektromaschinenfabrik (Breuer Motors) – German manufacturer of engines and transformers used in underground mining,
- ✓ Elin Motoren – German manufacturer of engines and generators used, among others, in mining industry,
- ✓ Ferrit s. r. o. – Czech manufacturer of machines and equipment used for cable and rail transport,
- ✓ Sandvik Mining and Construction – Swedish manufacturer of equipment for mechanical excavation of rocks, drilling, mining, transformation and demolition, as well as for close transport of mass materials,
- ✓ Semperit AG Holding – Austrian manufacturer of rubber and plastic goods, including conveyor belts,
- ✓ Siemag Tecberg – German supplier of complete shaft transport systems.

Among the competitors also Chinese enterprises supplying equipment for the local hard coal mining were identified but without pointing at specific enterprises.

The other two questions concerned factors deciding about the competitive advantage of Polish and foreign enterprises. The first of them, referring to the sources of own competitive advantage on the three largest foreign markets, caused a lot of problem to the surveyed. While they were able to identify a number of significant competitive factors, they were unable to determine their hierarchy. It is a sign of lack of recognition of one's own strengths and weaknesses, which may make the competition on foreign markets harder to a significant degree.

Generally, as the source of competitive advantage on the Russian market the price, quality and reliability were identified. On the German market the punctuality of deliveries were considered to be a significant source of competitive advantage. In China the Polish manufacturers are valued for quality and price. These two factors are also appreciated on the Ukrainian market along with the manufacturing technology. Price and quality are parameters that allow one to conquer the Czech market. In Morocco the Polish manufacturers achieve competitive advantage thanks to flexibly adjusting to the individual orders. Argentina appreciates the price, quality and reliability of Polish mining machines and appliances. According to the above, in the competition on foreign markets, such factors as punctuality of deliveries and additional services are less significant factors.

The Polish manufacturers may identify sources of competitive advantage on foreign markets in a much better way. They are presented in figure 2.

According to the data presented in chart 1, the main source of competitors' advantage on foreign markets is price. Other factors are also important, among them references and certification of the recipients were identified. The competitors achieve advantage also because of the factors considered by the Polish manufacturers to be less significant: such as punctuality of deliveries and additional services [15].

In the next part of the research, based on seven questions the assessment of image of the Polish brands in target countries was conducted. The first question referred to the way of conducting promotional actions in the foreign countries. The surveyed in this case had the options of action conducted: on one's own, via agent or on the national level. This question concerned all seven countries identified as markets with high export potential in the industry of mining machines and appliances. Aggregation of results for all countries made it possible to determine that most often promotional actions are conducted on one's own.

Only 12 % of the surveyed uses help from producers associations and 9 % conducts promotional actions on the national level.

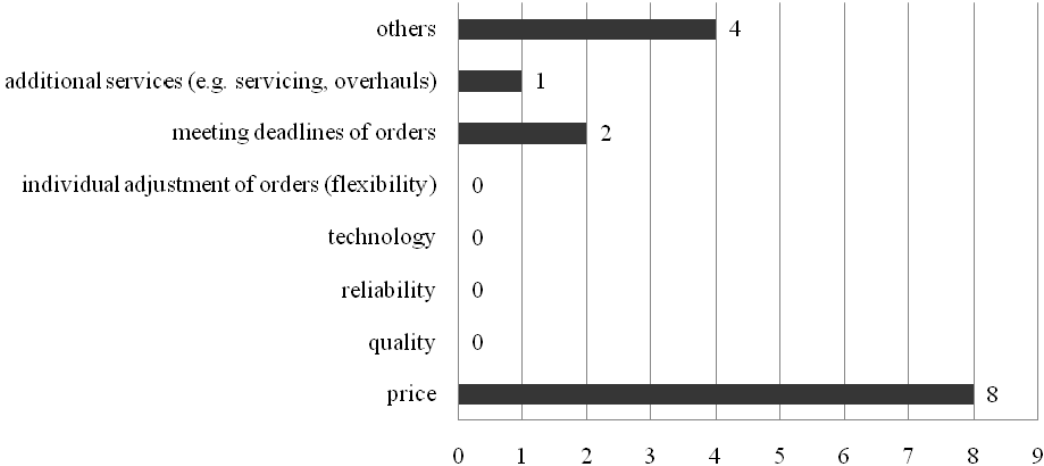


Figure 2. Factors deciding about the advantage of competitors on foreign markets [number of identifications]

Source: own work based on questionnaire research.

Another question of the questionnaire research concerned a precise determination of the form of conducting promotional actions. The distribution of answers to the questions for all of the examined markets is presented in figure 3.

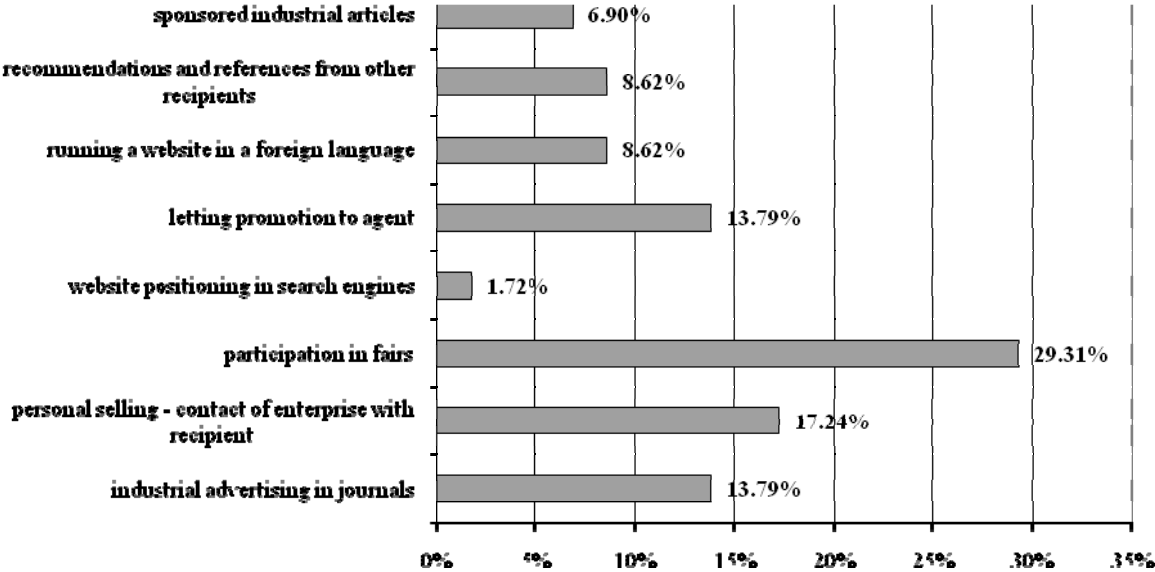


Figure 3. Forms of conducting promotional actions in the countries with high general export potential

Source: own work based on questionnaire research.

A dominant form of promotion used by the manufacturers of mining machines and appliances on the markets with a high export potential at the moment is taking part in fairs. Personal sales, entrusting the promotion to an agent and advertising in trade magazines are also popular. However, the enterprises do not use the easily accessible and relatively cheap forms of promotion such as, running a website in other language or recommendations and references from users.

The results above indicate the significance of fairs and personal contacts in conducting marketing actions in the industry of mining machines and appliances. However, one should consider supplementing those forms, especially as some of them do not require significant input of time and money.

Another question concerned the assessment of brand recognition on the markets with a high export potential. The grade was given in the scale from 1 to 4: 1 – very well-known, 2 – well-known, 3- known not very well, 4 – unknown. The distribution of answers to this question is presented in figure 4.

On the Argentine, Chilean and Hindu markets Polish brands in the mining machine and equipment industry are not well-known. Low level of recognition of the Polish enterprises also characterizes Vietnamese market. Polish brands are best-known in Russia, China and Kazakhstan. It corresponds with the multi-year cooperation conducted with those countries and geographical proximity of the markets in Russia and Kazakhstan.

The relation between the time of cooperation and brand recognition was confirmed by the next question in which the examined enterprises described the time of carrying trade with the countries identified as markets with a high export potential. And so, the contacts with Russia and China are characterized by the longest cooperation, encompassing a period from 10 to 20 years or more. The enterprises had the shortest cooperation with the markets of South America – up to 5 years. An average period of international exchange characterizes India, Kazakhstan and Vietnam – from 5 to 10 years.

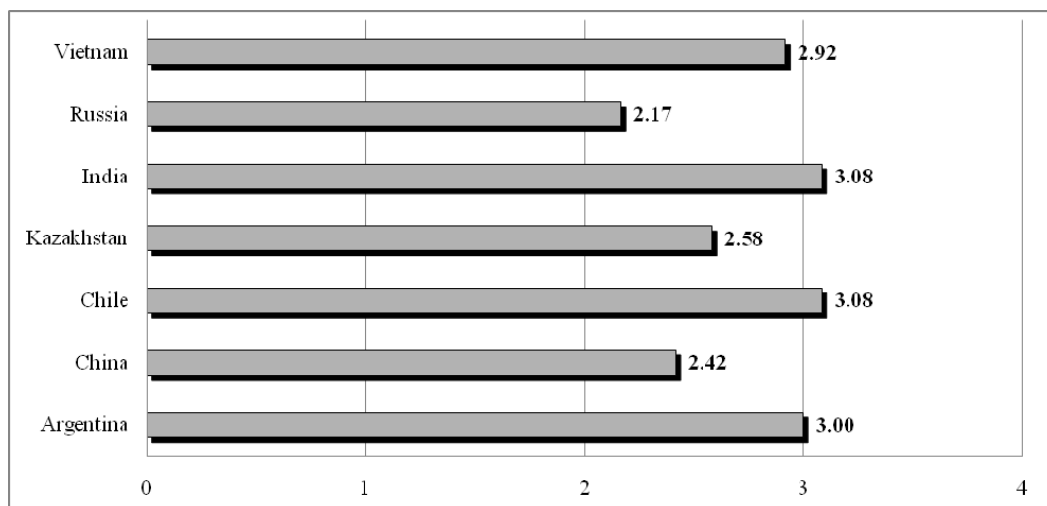


Figure 4. Assessment of brand recognition on the markets with high export potential (scale from 1 to 4)
Source: own work based on questionnaire research.

Another question in the research was meant to identify the degree of loyalty of the recipients in the specific countries of the international expansion. The recipients may be evaluated as very loyal – 1, moderately loyal – 2 or disloyal – 3. The Russian recipients are considered to be very loyal (50 % of identifications). By half of the surveyed they are assessed as moderately loyal. No one from those surveyed graded Russian contractors as disloyal. Recipients from Kazakhstan are also considered to be very loyal or moderately loyal. 20 % of those examined consider Chinese recipients to be very loyal. 40 % believes they are moderately loyal. Recipients from India and Vietnam are considered to be moderately loyal; they are not graded as very loyal but respectively 7 % and 6 % of the surveyed considers them to be moderately loyal. The worst in the area of loyalty is the Argentine and Chilean market. 50 % of the surveyed considers the recipients from these markets disloyal. The rest considers them to be moderately loyal.

In the next part of the research, in another question, the surveyed were asked to identify features that distinguish the offer of the enterprise from others on the target market. The most often identified were: reliability, high technical level, complexity of the offer including services as well as permanence.

The last question was a settling question, tying promotional actions with the brand image. Over eighty percent of the surveyed perceives a relationship between actions promoting the enterprise and the brand image on the target markets. It means that the promotional actions are important in conducting and broadening the international expansion of the enterprises.

Conclusions and recommendations for further research. Currently, the examined Polish enterprises in the industry of mining machines and appliances direct their export to the following countries: Argentina, Austria, Australia, Bosnia, Belarus, Bulgaria, China, Czech Republic, Finland, Spain, the Netherlands, Kazakhstan, Colombia, Lithuania, Mexico, Marocco, German, South Africa, Russia, Romania, Serbia, Ukraine, United Kingdom and Vietnam.

The most intensive and the longest trade in the industry is carried between such European countries as: Germany, Russia, Ukraine and the Czech Republic.

Among the new directions of the international expansions, planned in the following years of activity, are the following: North and South America, Australia, Bosnia, China, Finland, India, Canada, Mexico, Russia, Sweden, Turkey, the United States and Vietnam.

Additionally, in the course of the research conducted in the area of internationalization in the industry of mining machines and appliances, Argentina, China, Chile, India, Kazakhstan, Russia and Vietnam are considered to be the markets with a high export potential.

The surveyed as the main source of competitive advantage on foreign markets named price, quality and reliability. Punctuality of deliveries and additional services are considered to be less important. On the other hand, the basic source of advantage of foreign competitors is price. It is supplemented by: punctuality of deliveries and additional services. It stems from the above that the price advantage of the Polish enterprises may lose its significance if the foreign enterprises also have it, especially as they offer the recipients such values that are thought by the domestic manufacturers to be less important in the competition, namely: punctuality of deliveries and additional services.

The Polish enterprises most often conduct promotional actions on their own on the markets with a high export potential. The most commonly used forms of promotion are: taking part in fairs and personal sales. The entrepreneurs rarely use easily accessible forms such as websites in foreign language or references and recommendations from other users. The manufacturers perceive a relationship between the promotional actions and image of the brand on foreign markets.

On the geographically distant South American markets the Polish brands of manufacturers from the industry of mining machines and appliances are poorly recognizable. The highest recognition of Polish manufactures characterizes Russian, Chinese and Kazakh markets. These markets are also characterized by the longest period of cooperation with the Polish companies. Russian, Kazakh and Chinese recipients are considered to be the most loyal. Chilean and Argentine recipients are thought to be disloyal.

Research in the area of competitiveness of the Polish industry of mining machines and appliances may be continued in the three basic research directions. The first one is to elaborate detailed expansion strategies adjusted to the identified target markets. It requires a deep recognition of these markets and to draw up precise actions enabling the range extension of international expansion.

The second possible direction for further research is to use an industrial consolidation in the international expansion [16]. Currently, in the Polish industry of mining machines and appliances there is an intensification of consolidation processes observed, what allows the large capital groups mostly to extend their product offer and strengthen the position on the domestic market. Such consolidation, in an extended coordination or capital form, could also reinforce the position of Polish producers on international markets.

The third direction for further research is to elaborate the market strategies for the particular enterprises on the current and potential target markets [17]. These days, the range of tools used for this purpose is very limited. However, a proper offer presentation of the Polish producers of mining machines

and appliances could increase their participation in the international market what, in a current state of the Polish hard coal mining, is a condition for further development of the industry of mining machines and appliances.

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