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## Business alliances in the economy of EU countries

### Бізнес-альянси в економіці країн ЄС

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#### Abstract

The activities of business alliances in the EU are being transformed by the aid of the policy implementation of industrial alliances development, which provides for a wide network formation of stakeholders in reducing the dependence of member states on raw materials of third countries. The purpose of the academic paper lies in assessing empirically the business alliances effectiveness in the EU based on the case studies analysis on creating strategic alliances. Methodology. The case method has been used in the course of the research in order to analyse the activities and effects of business alliances within the established network for cooperation of the European Raw Materials Alliance (ERMA). The results demonstrate the uncertainty in the strategic business alliances effectiveness in the EU; it is difficult to assess the potential quantitative effect from the company's resources synergy – alliance members in the short-term prospects. Despite the well-established principles, the choice of the alliance management form as joint venture, the company's market value has decreased. The

#### Анотація

Діяльність бізнес-альянсів в ЄС трансформується завдяки реалізації політики щодо розвитку промислових альянсів, яка передбачає формування широкої мережі зацікавлених сторін у скороченні залежності країн-членів від сировини третіх країн. Мета статті полягала в емпіричній оцінці ефективності бізнес-альянсів в ЄС на основі аналізу кейсів у створенні стратегічних альянсів. Методологія. У дослідженні використано метод кейсів для аналізу діяльності та ефектів функціонування бізнес-альянсів в рамках створеної мережі для співпраці The European Raw Materials Alliance (ERMA). Результати демонструють невизначеність в ефективності стратегічних бізнес-альянсів в ЄС, важко оцінити потенційний кількісний ефект від синергії ресурсів компаній-учасників в короткостроковій перспективі. Незважаючи на чітко сформовані принципи, вибір форми управління альянсом у вигляді спільного підприємництва вартість компанії на ринку скоротилася. Перевагами у бізнес-альянсі є

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advantages of the business alliance include the supply chain diversification of raw materials from Third World countries to EU countries for industrial production. The theoretical and practical research value lies in supplementing the transaction costs theory and the theory of resources, explaining the business alliances creation. In practice, companies - members of business alliances combine the features of both theories in order to take into accounts both costs and synergies from resource integration.

**Keywords:** Business alliance, market integration, strategic alliances, competition strategies, partnership, innovative business alliances.

## Introduction

The activities of business alliances in EU countries are being transformed by the aid of the implementation of the policy on the development of industrial alliances, which provides for the formation of a wide network of stakeholders in reducing the dependence of member states on raw materials of third countries. The formation of the network of alliance members is conducted based on the strategy of diversification of primary raw materials regulated by European Commission.

The European Green Deal and the EU's new industrial strategy have identified access to resources for strategic security issues in order to ensure green and digital transformations. The strategy involves the optimization of supply chains, processing of raw materials to meet the needs of industrial production. The strategy includes the EU Recovery Plan with a focus on developing a green, sustainable, digital economy. The development of sustainable, diversified raw material supply chains is a component of a strategy that includes the functioning of the European Raw Materials Alliance (ERMA) since September 2020 as part of the Action Plan on Critical Raw Materials. Within the framework of the alliance, the network of key stakeholders has been established ("industrial actors along the value chain, Member States and regions, trade unions, civil society, research and technology organisations, investors and NGOs"). Accordingly, the ways of organizing business

диверсифікація ланцюга постачання сировини з країн третього світу в країни ЄС для цілей промислового виробництва, створення екологічно чистої технології переробки сировини на основі ліцензованого патенту. Серед інших переваг у створенні альянсу: розробка продуктів з вищою доданою вартістю, ріст прибутків від їх продажу; інтеграція ресурсів та отримання синергії від їх об'єднання. Теоретико-практична цінність дослідження полягає у доповненні теорії трансакційних витрат та теорії ресурсів, які пояснюють створення бізнес-альянсів. На практиці компанії – учасники бізнес-альянсів поєднують характеристики теорії трансакційних витрат та теорії ресурсів для врахування як витрат, так і синергії від інтеграції ресурсів.

**Ключові слова:** бізнес-альянс, ринкова інтеграція, стратегічні альянси, стратегії конкуренції, партнерство, інноваційні бізнес-альянси.

alliances in the EU are being transformed, which makes it relevant to study the features of their functioning.

The purpose of the academic paper lies in assessing empirically the effectiveness of business alliances in the EU based on the analysis of case studies on creating strategic alliances.

## Literature Review

### *The role of alliances in business*

A potential success factor is the company's ability to search for partners and establish business relationships with them, which are called alliances. The partnership ensures the commercialization of new innovative products, which are the ultimate goal of creating alliances (Valentine et al., 2003). Along with this, the partnership provides an opportunity for staff training, creation of new production methods and innovations, attraction of investments, exchanging technologies, knowledge, experience, in contrast to the autonomous hierarchical structure of the organization (Liebeskind et al., 1994). According to the theoretical concept of a resource-oriented management structure, consociated companies create new competitive advantages through the existing network, ecosystem (Lavie, 2006). Alliances also provide more effective collaboration policies in various industries with

academic circles, financial markets and technology companies (Harada et al., 2021).

### ***Advantages of business alliances***

The scientific literature highlights a number of benefits in creating business alliances; the basic ones include as follows: the potential of financing at the expense of investors, development of pragmatic management skills, and evolution of management teams thanks to venture companies financing start-ups. Additionally, the other strengths should also be mentioned, namely: direct strategic guidance, obtaining pieces of advice on the implementation of projects from venture capital companies financing the activities of the business alliance (Hellmann & Puri, 2002; Faber, Castaldi & Muskens, 2016). All the advantages of business alliances can be systematized as follows:

1. Potential for funding, especially if there is a need to develop innovative products requiring research and development (Marin et al., 2015). In the case of financing business alliances that develop innovations, investors receive royalties, patents, and the right to marketing (Lazonick & Tulum, 2011).
2. Gaining new skills and knowledge in order to bring products to market of production, marketing, sales, etc., ensuring the success of research and development (Higgins, 2007).
3. Reduction of time to bringing products to market due to shortening the period of research and development (McCutchen Jr & Swamidass, 2004).
4. Increasing the level of corporate reputation of business alliances, and, consequently, a greater potential for attracting investments due to entering into the stock market (Nicholson, Danzon & McCullough, 2002).
5. Sustainability in business development due to the synergy of partners' resources, reduction of production costs (Kazakova et al., 2018).
6. Achieving stability in the market, competitive advantages through alliances, which are a strategy for companies implementing various forms of cooperation (Gomez, 2015; Hretcanu & Hretcanu, 2016).

### ***Types and strategies of alliances***

The investigation of Ortiz-de-Urbina-Criado, Montoro-Sánchez & Mora-Valentín (2014) considers the choice of alliance type (the joint venture based on shareholder agreement or

contractual agreements) depending on business strategies (expansion (growth), diversification and internationalization). The type of alliance influences on the method of managing it (the way in which cooperation is organized). When entering into new international markets (internationalization), the joint venture is usually chosen, which involves the establishment of a company independent of the parent one. The conclusion of contractual agreements assumes the creation of an alliance based on long-term contracts, license agreements, and franchises. In the investigation conducted by Harada et al. (2021), the following strategies of business alliances for the successful implementation of strategic projects and stable business continuity have been identified, namely: "in-licensing and value up", "best-in-class", "platform leadership" and "first-in-class".

### ***Forms of managing business alliances***

In order to analyse the form of managing business alliances, the theory of transaction costs and the theory based on resources have been developed. The theory of transaction costs is the basis for evaluating the effectiveness of alternative forms of economic organization: equity or non-equity (Mamédio et al., 2019). The main type of alliance within the framework of cooperation based on investments in equity capital (equity) is the joint venture. This form involves signing a contract with a unified management structure, creating an independent enterprise separate from the parent companies (Bamel et al., 2021). Non-shareholder alliances include a wide range of contractual agreements, such as licensing agreements, franchises and long-term contracts (Sadegh et al., 2020). In addition to these traditional forms of organising alliances, other market transactions can be carried out between companies, forming relations between them based on a market and hierarchical form of management.

The transaction cost theory suggests that an alliance based on ownership and equity contributions implies management based on a hierarchical structure. Along with this, a contract-based alliance involves management based on the market structure, other hybrid forms of management depending on the type of alliance. Furthermore, the transaction cost theory also assumes that the chosen form of management depends on the desired degree of commitment, control and flexibility (Li et al., 2012). In this case, alliances gain two advantages: commitment and control. In the equity alliance, the partners accept formal

commitments; they make large investments in the project, which complicates the emergence of opportunistic behaviour (Teng & Das, 2008). In the case of joint ventures, considering that a new company is established, the partners have more control over the activities they carry out jointly. Joint ventures also ensure the use of synergies of resources and costs (Chen & Chen, 2003). At the same time, such an alliance is characterized by shortcomings related to negotiations, the costs due to any changes in relationships or concluded agreements. This means less flexibility of joint ventures. Contractual alliances provide for faster and more flexible implementation of projects, but greater vulnerability of partners to the opportunistic behaviour of other parties, fewer opportunities for learning and using synergies (Chen & Chen, 2003).

In contrast to the transaction cost theory, the resource theory (Barney, 1991) analyzes a particular firm and its growth process, focusing on the value or benefits of transactions, rather than the cost of operations. The company should maximize the value of transactions through its own resources, capabilities and organizational processes. The resource theory involves the creation of business alliances in order to enable firms to gain access to valuable additional partners' resources. The theory also suggests a shift in focus to organizational learning and resource sharing (Osborn & Hagedoorn, 1998). From the point of view of the resource theory, the choice of how to manage an alliance is determined by its ability to receive valuable resources from another company without losing control over its own resources. Contractual agreements are characterized by providing access to fewer external resources and require less commitment of resources than equity alliances. They are also characterized by greater risk of appropriation of knowledge and less control over the situation. Thus, the comparison of joint ventures with contractual agreements suggests that the former offer more opportunities for the transfer of resources. Joint ventures are more common in companies, the main goal of which lies in gaining tacit knowledge from their partners and resources that are not easily assigned to others (Comino et al., 2007).

### Methodology

The case method has been used in the course of the research in order to analyse the activities and effects of the functioning of the European Raw Materials Alliance (ERMA), which is one of the industrial alliances of the European Union (European Commission, 2022). Information and

data on the alliance posted on the official website <https://erma.eu> have been used for the analysis. ERMA is created to achieve the goals of stakeholders within the framework of EU policy. The study of the functioning of ERMA involves identifying the features of the alliance (characteristics: participants, principles, funding, and way of organizing activities).

### Results

ERMA is one of the EU's industrial alliances towards achieving the goals of sustainability, competitiveness of the European economy, digitalization and reduction of the negative impact on the environment. The EU forms industrial alliances in order to bring together public and private partners, civil society in different sectors or value chains. The main goal of ERMA is to create sustainability, ensure strategic autonomy of the EU for "Europe's rare earth and magnet value chains" (European Commission, 2022).

The alliances function in accordance with the EU's sustainable development policy and have the features as follows:

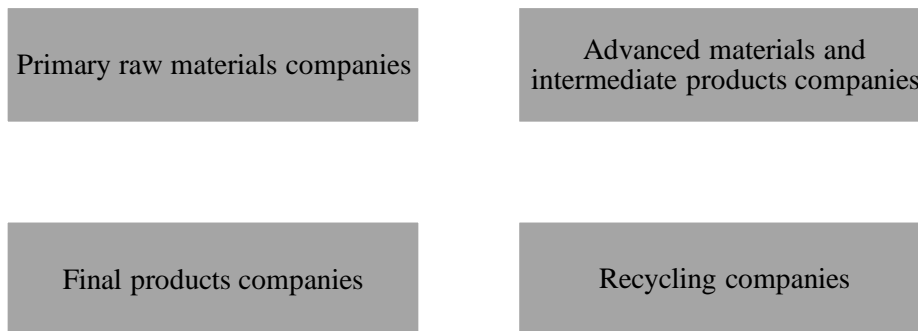
- 1) the common goal towards achieving the EU's goals;
- 2) involvement of partners at different levels of management to create a value chain: EU countries, regions, industrial companies, private investors, financial institutions, innovation companies, research organizations and research institutes, society, etc.);
- 3) basic principles of activity: transparency, openness, diversity, inclusiveness, compliance with competition rules;
- 4) the alliances are not involved in the EU policy, funding or regulatory decisions;
- 5) lack of direct mechanisms for financing alliances.

The ERMA network includes partners that are manufacturers of primary raw materials, advanced materials and intermediate products, final products and recycling companies (Figure 1). Each group of network members includes private companies from different EU countries, namely:

- 1) the companies producing primary raw materials include the Austrian company *3GSM GmbH* (it provides a reduction in the negative impact of raw material extraction on the environment), the French company *45-8 Energy* specializing in the ecological

- production of helium, the Polish geological research and consulting company *ABC A HEAD*, the Spanish company *Acuvet Biotech SL* for veterinary diagnostics, the French company *Adionics* (the supplier of technologies in the supply chain of desalination systems), etc.;
- 2) the companies in the field of advanced materials and intermediate products include the Spanish company *ALS* (the world leader in laboratory testing, inspection, certification and verification services), the German company *AMG Lithium GmbH* (the leader in the supply of lithium to the EU for

battery production, with extensive experience in research and development, production and marketing), the French company *Arelec* in the field of magnetic innovation and development, the Norwegian company *Bergen Carbon Solutions AS* specializing in the development of innovative technologies for the production of carbon nanofibers using CO<sub>2</sub> and Norwegian Hydropower; the Ukrainian company *BGV Group Management* on the extraction of metals for the production of electric vehicles, etc.

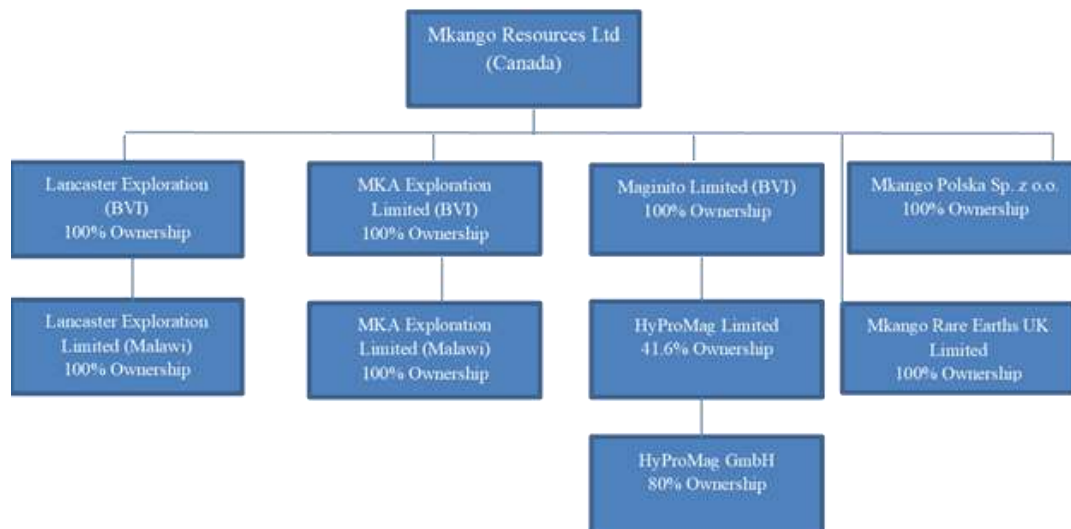


**Figure 1.** The ERMA partner network.  
Source: The European Raw Materials Alliance (2022b).

**Projects of business alliances within the framework of the ERMA partner network**

One of the first projects within the ERMA partner network is the *Mkango – Pulawy project* (*Mkango’s Songwe Hill Rare Earths Project*, abbreviated “*Songwe*”) based on the cooperation of the Canadian company *Mkango Resources Ltd.*, the Polish chemical company *Grupa Azoty Zakłady Azotowe “Pulawy” S.A.* on the extraction of raw materials in Africa (The European Raw Materials Alliance, 2022a). Within the framework of this business alliance, ERMA contributes to the diversification of the value chain of rare earth elements for Europe’s green transition. *Mkango – Pulawy* is a multinational international project based on the strategy of diversification of raw materials for industrial production in Europe through the involvement of the Canadian company *Mkango Resources Ltd.*, the Polish chemical company *Grupa Azoty Zakłady Azotowe “Pulawy” S.A.* (“*Grupa Azoty Pulawy*”) for the development of the Songwe Hill deposit in the Republic of

Malawi (Africa). *Mkango Resources Ltd.* is the Canadian company on the exploration and development of minerals. *Grupa Azoty Pulawy* (*Warsaw Stock Exchange: ZAP*) is part of the *Grupa Azoty Group*, the second largest producer of nitrogen, complex fertilizers in the European Union, a manufacturer of chemicals, whose products are exported to more than 20 countries, including Europe, the USA and Asia. Figure 2 shows the creation of the business alliance in the form of the joint venture based on an agreement of shareholders to enter into new international markets (internationalization of business). This involves the creation of companies within the alliance, independent of the parent companies (*MKA Exploration Limited Malawi, Mkango Polska, HyProMag Limited*). The alliance has chosen a diversification strategy, as well as the in-licensing and value up strategy for the successful implementation of strategic projects and stable business continuity, which will ensure the growth of added value and profit through the use of licensed patents for production technologies.



**Figure 2.** Mkango Resources Ltd. The Company's Structure.  
Source: Mkango Resources Ltd. (2022).

The Mkango – Pulawy project provides for the supply of raw materials to the plant in Poland, the creation of diversified supply chains, support for the EU industrial ecosystem, job creation (Figure 3). The aim of the Mkango – Pulawy project lies in creating an environmentally friendly supply chain option for rare earth components (neodymium, praseodymium, dysprosium and terbium) for European Union, which are required in the production of electric vehicles, wind turbines and other forms of clean energy, the key ones to the EU's sustainability strategy.

The Mkango Mine Project, Songwe Hill, is characterized by a number of benefits provided by all stakeholders. Songwe Hill is located in a stable jurisdiction with established infrastructure

(approximately 70 km from the former capital of Zomba and approximately 90 km from the commercial center of Blantyre). The infrastructure includes an international airport, a railway station, and asphalted roads running from urban centers 12 km from Songwe Hill. Secondary gravel and dirt roads provide transport access to the reconnaissance camp; upgraded bridges are capable of supporting 20-ton trucks. There is a deposit of rare earths on Songwe Hill: rare earth mineralization has occurred in carbonatites. As part of the project, the resource estimate was updated in February 2019: the new estimate indicates a 60% increase in the resources of the deposit, which are available by open-pit mining and are located less than 160 meters from the surface



**Figure 3.** Songwe Hill Project Highlights.  
Source: Mkango Resources Ltd. (2022).

The Mkango-Pulawa field development project envisages the creation of a separate jointly built plant by *Mkango and Grupa Azoty Zakłady Azotowe "Pulawy" S. A.* (*Grupa Azoty Zakłady Azotowe "Pulawy" S. A.*, 2022) on the basis of cooperation involving the separation of rare earth elements in Poland. In order to implement the project, a new Polish subsidiary *Mkango, Mkango Polska*, was established; an experienced director from Poland was appointed; the experts specializing on the division of rare lands, a team of technical advisers and engineers were involved. The stakeholders of the project have signed an exclusive land lease agreement in relation to the site, which is part of the complex of fertilizers and chemicals of *Grupa Azoty Pulawy* in Poland. The Polish chemical company grants access to infrastructure, reagents and utilities in Poland, provides a working environment ensuring the alliance with a highly competitive position in terms of operating costs for the constructed plant. The cooperation allows reducing the operating costs of the plant due to the location of the plant in the Polish Special Economic Zone, providing access to European and international markets. The plant's production enhances the security of supply of rare earth elements in Europe, which are used in the production of electric vehicles, wind turbines and other green technologies in the framework of strategic programs. The alliance's activities are also in line with European initiatives towards creating more secure, diversified supply chains and environmentally friendly production.

As a result of establishing a business alliance, *Mkango* will receive a number of benefits, including as follows:

1. Development of higher value-added products, growth in sales revenue: the company plans to mine 2050 tons of raw materials annually (neodymium (Nd) / praseodymium (Pr) oxides, dysprosium (Dy) and terbium (Tb) oxides in the deposit.
2. Integration of resources and gaining synergies from their combining: the construction of the plant involves environmentally friendly production of mixed rare earth carbonate from the Mkango Songwe Hill deposit.
3. Increasing the level of marketing flexibility with the simultaneous potential to attract more customers, providing the opportunities to increase production and sales of separated heavy rare earth elements.
4. The business alliance is a catalyst for regional growth and "green" transformation of production, processing of raw materials and further production of final products. Furthermore, the business alliance provides potential for further development of related companies, including companies in the field of renewable energy sources.
5. Cooperation also contributes to the creation of additional jobs in the regions of Poland and Africa.

Feasibility studies in relation to the construction of the plant are being conducted in parallel with the *Mkango Songwe Hill* project in Malawi and other opportunities, including the development of the production of recycled rare earth magnets *Mkango at HyProMag Limited* with a short cycle in the UK. *HyProMag Limited Company* (2022) provides development of a complete supply chain for the processing of rare earth magnets based on neodymium iron boron (NdFeB). The company has received a patent licence for the HPMS (Hydrogen Processing of Magnet Scrap) technology developed by the *Magnetic Materials Group (MMG)* of the University of Birmingham. This patent and related intellectual property is a key core and resource of *HyProMag*.

Market capitalization of *Mkango Resources Ltd.* over the past five years (May 2017–May 2022) was characterized by multi-vector dynamics, amounting to 75,10 million USD as of May 2022. The current value of the issued shares of the company is 1050 Canadian dollars.

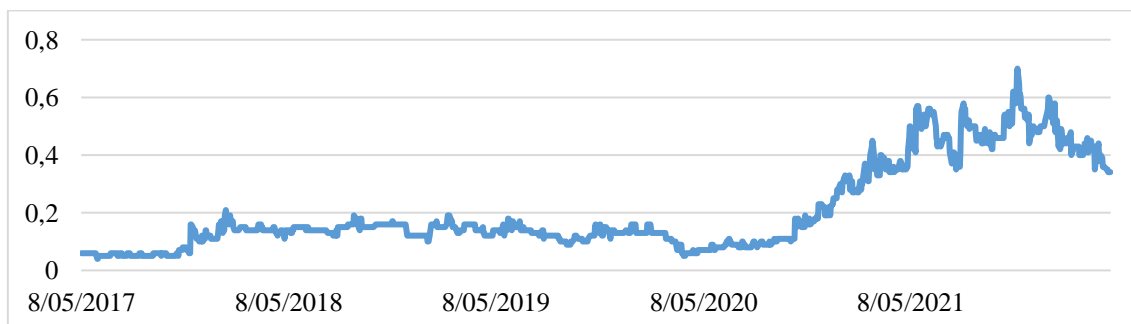


Figure 4. Dynamics of the share price of *Mkango Resources Ltd.* for the period May 2017–May 2022  
Source: Yahoo Finance (2022).

The increase and decrease of capitalization indicates the insufficient effectiveness of the chosen management structure of the alliance. The value of the company is 69,4 million USD. The company's value has decreased by 7,31 million USD. The inefficiency of management is evidenced by the indicators of return on assets – 107, 87 % and return on equity – 204, 47 % as of May 2022.

## Discussion

Within the framework of the EU industrial alliance ERMA partner network, new types of relations are being formed between participants in the business environment, characterized by a legally defined basis for the activities of business alliances. At first glance, the ERMA partner network should simplify the creation of alliances; however, the type of cooperation under consideration does not make it possible to assess the quantitative direct effects of joint ventures. At the same time, the establishment of the Mkango-Puławy alliance involves the diversification of supply chains, support for the EU's industrial ecosystem, and job creation. The project within the framework of the Canadian-Polish partnership is in line with the EU's sustainability and competitiveness strategy, which envisages the future growth of industry in member states due to the supply of raw materials from third world countries. In addition, the project is implemented on the basis of a growth strategy that also complies with EU policy. The growth strategy envisages the creation of a joint venture based on a shareholder agreement (Ortiz-de-Urbina-Criado, Montoro-Sánchez & Mora-Valentín, 2014; Bamel et al., 2021), in the framework of raw material diversification and internationalization. The established alliance has defined the method of managing it (the way of organizing cooperation): the creation of companies, independent of the parent ones, which have the relevant resources (technology, infrastructure, personnel and working environment). Along with this, within the alliance framework, the in-licensing and value up strategy is used for the successful implementation of strategic projects and stable business continuity (Harada et al., 2021). The establishment of a business alliance corresponds to the theory of transaction costs, according to which the form of management determines the type of alliance (Mamédio et al., 2019). However, it should be noted that the joint venture makes it impossible to determine the potential effects from the synergy of the resources of the participating companies, which does not correspond to the theory of transaction costs in

the context of ensuring the use of synergy of resources and costs in the case of joint ventures (Chen & Chen, 2003). Consequently, there are no accurate synergy estimates on the project website: "Greater integration – plant development fully underpinned by sustainably sourced, purified mixed rare earth carbonate from Mkango's Songwe Hill operations, with other synergies being evaluated". It should be emphasised that the business alliance does not fully comply with the theory of transaction costs. In the course of studying the main advantages it has been determined that the company provides "development of products with higher added value, growth of profits from their sale". Actually, this means taking into account the benefits from transactions (costs), which corresponds to the theory of resources (Barney, 1991). The companies maximize the value of transactions through their own integration of resources, capabilities (technological, market) and organizational processes. In addition, the theory of resources suggests the formation of business alliances to gain access to firms to the valuable additional resources of partners. In the context of the project under consideration, the alliance provides access to the resources of the Republic of Malawi, access to the infrastructure and working environment in Poland, access to the EU markets. This means that in practice, business alliance members combine the features of the transaction cost theory and the resource theories in order to take into account both costs and synergies from resource integration.

## Conclusion

In the course of the research, uncertainty in the effectiveness of strategic business alliances in the EU has been revealed; it is difficult to assess the potential quantitative effect from the synergy of the resources of companies – alliance members in the short term. Despite the well-established principles and the choice of the form of alliance management in the form of joint venture, the company's market value has decreased. The advantages of the business alliance include the diversification of the supply chain of raw materials from third world countries to EU countries for industrial production, the creation of environmentally friendly technology for processing raw materials on the basis of a licensed patent. Furthermore, the other benefits in creating an alliance are as follows: development of products with higher added value, growth of profits from their sale; integration of resources and obtaining energy from their integration; increasing the level of marketing flexibility with the simultaneous



potential to attract a larger range of customers; regional growth in the EU countries and the “green” transformation of production, processing of raw materials and further production of finished products.

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