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Economic Business Partnerships Within Industry 4.0: New Technologies in Management

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ABSTRACT

The article deals with the problem of using new technologies in management for economic business partnerships within Industry 4.0 that involves strategic interaction with business partners as well as evaluating key business partners and deciding on the strategy for interaction with them. The relationship revealed between the strategic-economic interests of the company and the business partners has laid a foundation for the company profile in terms of vertical strategic interaction within Industry 4.0. This makes it possible to evaluate the business partner support / opportunism, and thus to visualize any risks or opportunities that may be exerted by external stakeholders of the company and to assist in raising awareness of significant interaction. The developed algorithm makes it possible to rank suppliers using the ABC and VEN methods and evaluate them based on the reporting matrix. The role of analytical information in supplier relationship management (SRM) under conditions of variable economic factors has been substantiated within Industry 4.0. The results of this study are of current interest for generating relevant information so as to develop sustainable reporting by company within Industry 4.0. The findings of the study can be used to gain and strengthen a company's competitive advantage, since the effective supplier engagement can ensure the implementation of a procurement management strategy to support both the supply chain and achievement of goals of the entire logistics system of the company.

INTRODUCTION

As an open system, the company operates in a complex, unstable and dynamic external environment in terms of complex interdependence networks within Industry 4.0. This, on the one hand, provides companies with additional opportunities to pursue their own interests and, on the other hand, restricts their activity in the market, creates potential threats and risks. Under these conditions, the use of analytical tools to format the information that is essential for managing the company's activity contributes to the establishment of partnership and becomes an important factor in ensuring sustainable development. The research purpose is to substantiate the use of innovative technologies in management of the company while ensuring economic business partnerships within industry 4.0. An analysis of empirical data and available research economic business partnerships has shown that collaboration with business partners enables us to build a relationship management strategy and select key business partners, and thus to affect directly the company's performance within industry 4.0. Innovative analytical tools for evaluating company suppliers (rating methods, activity-based costing (ABC), VED (vital, essential, desirable) analysis) are presented. The developed algorithm makes it possible to rank suppliers using the ABC and VEN methods and evaluate them based on the reporting matrix. We are aware that stakeholder relationships affect the company's key performance indicators such as level of profitability, indicators of business activity, amount of accounts payable and receivable. Empirical evidence shows that the value of current liabilities in the currency of Ukrainian companies' balance sheet is growing and it comprised 68.5% at the end of 2018. The same indicator for Czech companies makes up 41.6%. A large portion of current liabilities for Ukrainian companies are accounts payable. In the Czech Republic, this figure is much lower (Figure 1).

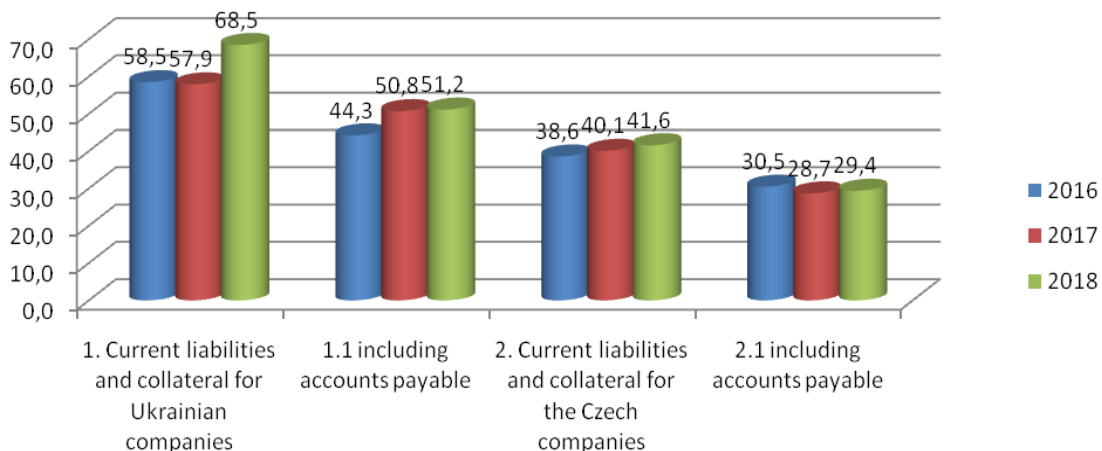


Figure 1. An analysis of current liabilities for companies in Ukraine and the Czech Republic

Source: ukrstat.gov.ua, http://ec.europa.eu/eurostat/statisticsexplained/index.php/Main_Page

The level of receivables in the current assets of Ukrainian companies comprises 50-60% (State Statistics Service of Ukraine), the Czech ones — 28 to 32% (EuroStat). Most often, companies are characterized by uneven distribution of the debt burden. When receivables exceed accounts payable, it means diversion of funds from economic turnover, which may further cause the need to attract expensive bank loans for supporting current activities within the company. Therefore, the company should establish a policy for managing receivables and payables which means analyzing and evaluating the company's major debtors and creditors. Consumers and customers have the largest share in accounts receivable, whereas suppliers and contractors possess the largest one in accounts payable. These data indicate that one of the key stakeholders is the supplier and the consumer. Thus, it is advisable to build the strategic engagement with them. The impact of accounts receivable on financing a supply chain is analyzed by N. Chatnani (2018), who has shown that the business value is maintained through stakeholder engagement.

The system of key performance indicators focuses on non-financial indicators, i.e. the effectiveness of internal business processes and supplier relationships. In view of this, we consider it advisable to supplement the Sustainability Reporting with analytical information that characterizes the effectiveness of the company's economic business partnerships with its suppliers. The research findings are relevant and useful for large and medium-sized companies in the context of managing strategic stakeholder engagement as well as in applied logistics research of supplier relationship management within Industry 4.0.

1. LITERATURE REVIEW

The issue of active adaptation of companies to changes in the environment through economic business partnerships in various forms is being researched by scientists. Witjara E. have proven the importance and role of business partnerships for evaluating Indonesian digital industry (Witjara et al., 2019). The researchers (Ha et al., 2019) have come to the conclusion that the combination of transparent institutional environment and optimal level of state ownership contribute to the profitability of the company (Savitz and Gavriletea, 2019; Raszkowski and Bartniczak, 2018). Indra Pahala et al. (2019) indicate accountability in the stakeholder perspectives. Empirical evidence indicates that recent strategic initiatives by companies have increasingly focused on considering the interests of different stakeholder groups to enhance their own competitive advantage (Guo et al., 2019). Summarizing the research results obtained by R. Nurlinda et al. (2019) and U. Uwuigbe et al. (2018) for stakeholder relationships prove that most companies start managing relationships only when crises arise. This approach consumes a much time and resources which are better to invest in more important business processes.

Stakeholder management is analysed within project management as evidenced by the particular attention paid to stakeholders in virtually all recognized international project management standards including ISO 21500, ICB IPMA, PMBOK PMI, P2M Japan, P-4R (ICB — IPMA, ISO 21500:2012). In the context of increased environmental fluctuation, analytical information becomes a strategic resource which determines the effectiveness of management activities to ensure the economic business partnerships within industry 4.0. We agree with N. Ershova (2014) and Ibrahim et al. (2019), who have shown in their researches that companies are actively using modern theoretical and applied developments of information and analytical support in activity management. The modern analytical toolkit for managing the company activity with due regard for stakeholders is undergoing expansion and improvement. Therefore, L. Gill (1985) suggests determining the level of customer service based on the ABC analysis, and B. Donath (2002) uses the ABC analysis to evaluate suppliers.

The researcher notes that the use of the ABC method in supplier analyses is based on the assumption that suppliers are not all characterized by the same impact on efficiency, and thus it is advisable to interact more intensively with those suppliers who have a high turnover (Ibid.). An analysis of research papers on logistics and supplier relationship management (Kwon et al., 2019) has proven the relevance of supplier selection methods (cost factors, dominant traits, preference categories). However, estimation of weights in multi-criteria or factor score estimation can be considered as one of the most common choices.

2. DATA AND METHODOLOGY

The authors used methods of theoretical and empirical research. The method of analysis-synthesis was used to study the content and peculiarities of the interaction between the company and business partners and to identify trends in the interaction between the company and environmental actors in the world economy and in Ukraine. This made it possible to form a relationship between the strategic economic interests of the company and business partners. The next step of the study was to use logical and systematic approaches to build a profile of opportunities and challenges for the company in terms of vertical strategic engagement. This revealed an important role of external stakeholders in ensuring the development of the company. The suppliers whose continuous engagement is crucial for the company's survival and further activity have been carefully studied as part of external stakeholders. A logical approach is used to prove that the company will suffer serious losses if such an interested party ceases to

participate or their requirements are not met. The expert methods have been used to build a profile of strategic interaction between domestic companies and suppliers.

The ABC analysis, the VEN analysis, and scaling technique have been used to evaluate suppliers as key stakeholders in managing relationships. When evaluating a vendor the task of solving multicriteria problems is complicated by different factors used to evaluate the results of alternatives according to different criteria. Therefore, before proceeding with a multicriteria problem, the criteria should be reduced to one unit of measurement (usually dimensionless), that is, normalized by one of the following methods:

$$- q_j^0 = \frac{q_j(x) - q_j^{\max}}{q_j(x) - q_j^{\min}}; j = \overline{1, n} \quad (1)$$

where $q_j(x)$ – absolute value of the j^{th} criterion, $q_j^{\min} = \min q_j(x)$, $q_j^{\max} = \max q_j(x)$, n – number of criteria.

It is recommended that a multicriteria problem be solved using the method of additive convolution:

$$q(x) = \sum_n^{i=1} a_j, q_j(x) \rightarrow \max, \sum_n^{i=1} a_j = 1, a_j > 0 \quad (2)$$

If the private criteria have the same weighting criteria, then the solution is found using the method of uniform optimality:

$$- q(x) = \sum_n^{i=1} a_j, q_j(x) \rightarrow \max \quad (3)$$

by the multiplicative minimization method:

$$q(x) = \prod_n^{i=1} q_j(x) \rightarrow \max \quad (4)$$

or by the minimization or maximization method:

$$\max_j [\max q_j(x) - q_j(x)] \rightarrow \min \quad (5)$$

The authors of the study offer to further prioritize strategic engagement with the supplier based on the Supplier Quality Index:

$$- I = \frac{A_i}{A_1} \quad (6)$$

where I – supplier quality index; A_i – the i^{th} vendor rating; A_1 – score of the vendor with the best position (standard).

The questionnaire has been used to form a company rating when identifying key suppliers. Reporting has been used as an accounting method to plan and forecast the activities within the company and to justify supplier management decisions. The further use of the graphical method is aimed at visualizing the research results. The research structure was built and the conclusions were made with the help of the structural-logical method and the method of scientific generalization.

3. RESULTS AND DISCUSSION

3.1 Profile of Opportunities and Challenges for the Company

The company development in an unstable market environment depends on the effectiveness of partnerships. A strategic business partners engagement system is a tool for ensuring the strategic interests of the company including the identification of business partners, gathering information on key business partners, identifying their interests and the degree of influence on the company's activities, evaluat-

ing the areas of influence; analysing opportunities and prospects for interaction with stakeholders, and monitoring and evaluating the effectiveness of the stakeholder engagement system. The relationship between the strategic economic interests of the company and the business partners considers the type of the latter (internal or external) and the type of strategic interaction (vertical or horizontal), which makes it possible to form a projection of the interests of the stakeholders on the company and the possibility of their influence on the activities of the enterprise within industry 4.0. (Figure 2).

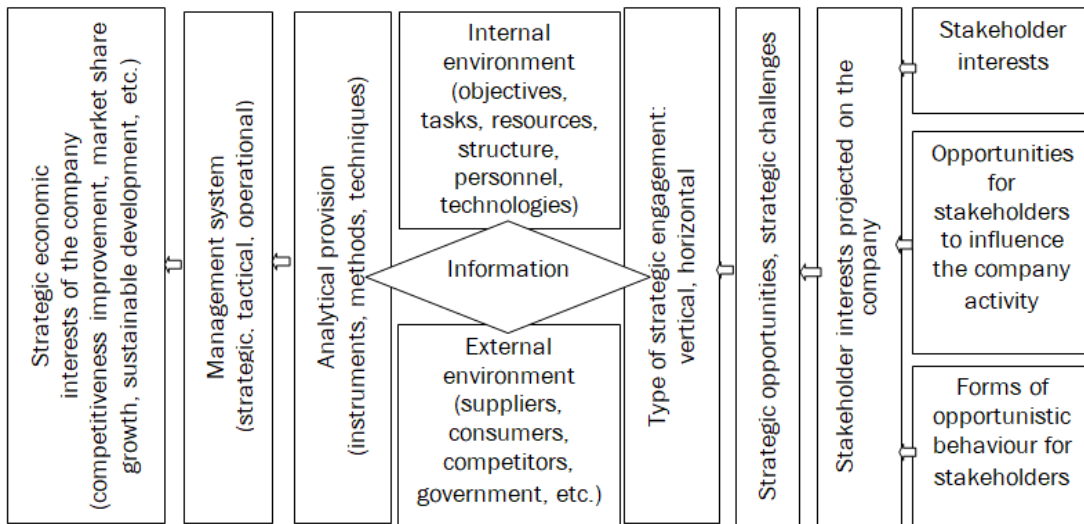


Figure 2. The relationship between the strategic economic interests of the company and the business partners.

Source: authors

The efforts of companies to ensure their sustainable development, especially during the strategic time interval, should be aimed at implementing the strategic economic interests of the company by establishing reflexively managed productive interaction with stakeholders in terms of its vertical and horizontal models (Figure 3).

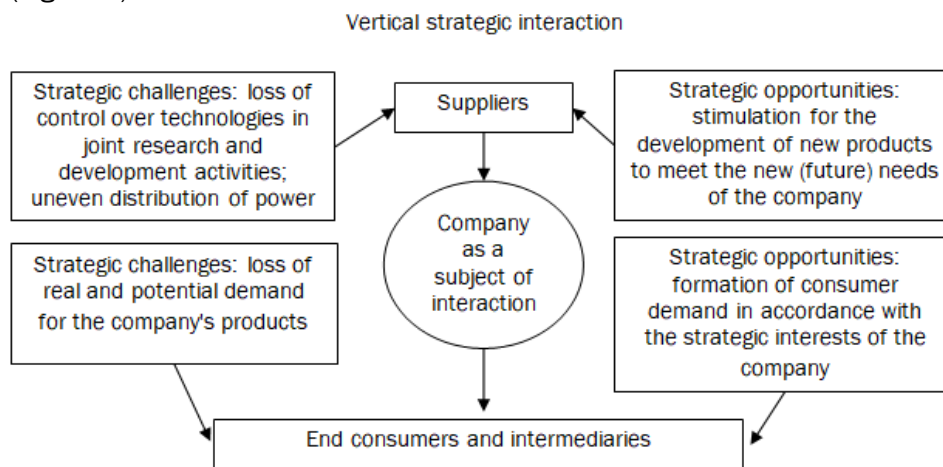


Figure 3. Profile of opportunities and challenges for the company in vertical strategic engagement (fragment)

Source: authors

This enables the company to take advantage of the opportunities provided by the external environment, namely acceleration of the innovative development, renewal and improvement of strategic busi-

ness relations with domestic and foreign partners, expansion of markets, etc. Suppliers of material and technical resources significantly influence the course of the manufacturing process and ensure the sustainable development of the company within Industry 4.0. Therefore, suppliers can be assigned to a strategic stakeholder group using the strategic supplier relationship management (SRM) approach. Empirical studies prove that the executives of domestic companies understand the advantages of cooperation with suppliers and contractors as for implementing the supply chain strategy and forming and exchanging information in strategic and operational planning activities (Portna et al., 2019). Effective decisions on selecting supply sources lay the foundations for creating a supplier base within a company. Therefore, long-term and transparent relationships are not only profitable but also inevitable for maintaining the company's competitive advantage in the market and creating or maintaining its image. An expert research of Ukrainian companies conducted in 2019 during the development of recommendations for improving strategic management accounting and analysis to ensure the economic security of the subject of economic activities under the conditions of adapting to market conditions allowed the developers to build a general profile of the factors that characterize the existing and desirable state of partnerships between domestic companies and suppliers (Figure 4).

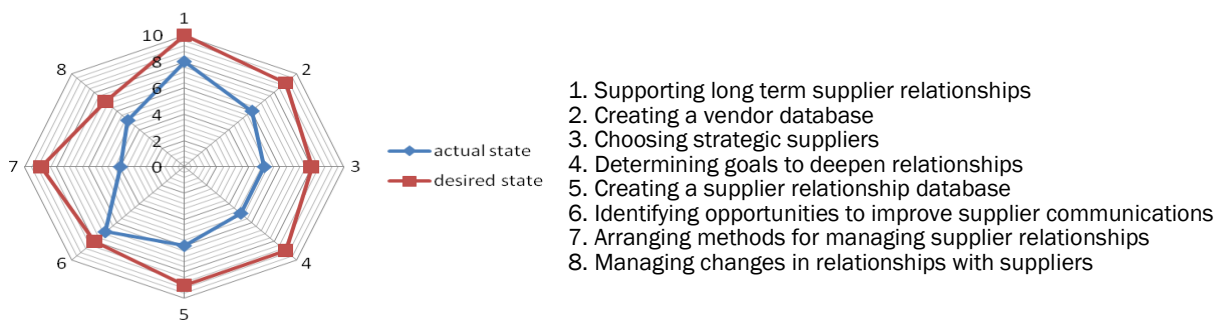


Figure 4. Integral profile of strategic interaction of domestic companies with suppliers

Source: authors

A number of factors should be considered when establishing long-term partnerships with suppliers; they are duration, cost-effectiveness of the relationship, the need (the ability to replace the material resources of an individual vendor with another ones), the ability to create value for the company and its stakeholders; the potential for continuous expansion of vendor supplies; expansion of the company's own capabilities — the latter can be achieved through cooperation with suppliers; and the risks inherent in relationships with suppliers, etc. Manufacturing and commercial companies should continually update their supplier base to select the best ones within their relationship management strategy.

3.2 Company Vendor Rating

An adequate supplier relationship strategy should be based on the use of analytical tools to obtain relevant information. Such analytical tools are the rating method (with the aim of ranking suppliers based on the scores provided by experts using a number of criteria), ranking of suppliers by the ABC method, the method of cost estimation; the method of dominant characteristics; and the method of preference categories. Table 1 shows the rating for suppliers of footwear companies. It was formed by developers of the methods used to manage the conflicts of interest among stakeholders so as to ensure the sustainable development of territories.

The rating has been formed using the expert assessment method based on vendor selection criteria that is "quality-price". Information on the terms and conditions of delivery, terms and payment, warranty obligations for the supply of material resources was obtained from a commercial offer submitted by the supplier. Interviews (questionnaires or surveys) provided information on criteria such as availability of a certified quality management system, product certification, supplier lifetime in the market, duration of supplier relationships, and the supplier's ability to flexibly change the nomenclature and volume of sup-

plies. Further, a 10-point scale was used by experts represented by the company scientists and managers to evaluate the supplier selection criteria. The weighting factors of the j^{th} criterion (a_{ij}) were expertly selected. The supplier who has received the highest score most closely meets the requirements of the overall criterion for the selection of the supplier and can be defined as the best partner. According to the results presented in Table 1, it is Supplier 5 with a score of 7.24.

Table 1. Company vendor rating (snippet)

Supplier selection criterion		a_{ij}	Company suppliers						
			1	2	3	4	5	...	n
Quality of the supplied material resources	Quantity of poor-quality materials and components	0.2	1.4	1.8	0.8	1.8	1.4	1.2	1.6
	Number of Acts for inappropriate materials and components	0.1	0.8	0.9	0.3	0.8	0.5	0.3	0.7
	Number of complaints from external consumers	0.03	0.15	0.24	0.15	0.27	0.18	0.12	0.12
	State of the supplier's quality management system	0.05	0.2	0.25	0.15	0.45	0.4	0.25	0.25
Quality of supply	Delivery time	0.1	0.6	0.4	0.6	0.5	0.4	0.4	0.2
	Completeness of delivery	0.06	0.3	0.42	0.42	0.48	0.36	0.36	0.12
	payment terms	0.1	0.5	0.3	0.4	0.7	0.2	0.5	0.4
	delivery frequency	0.08	0.56	0.24	0.4	0.32	0.4	0.4	0.16
	packing and packaging	0.02	0.16	0.1	0.04	0.12	0.1	0.12	0.06
	availability of automatic acceptance	0.01	0.09	0.08	0.05	0.05	0.04	0.02	0.04
Material resource cost	0.25	1	1.75	1	1.75	0.5	1.75	2.25	
Total		1.00	5.76	6.48	4.31	7.24	4.48	5.42	5.9

Source: authors

The results obtained from the calculations suggest that the vendor rating be summarized in a spreadsheet and structured to make decisions regarding the selection of strategic suppliers and the establishment of strategic engagement. In addition, the company will be able to justify the degree of trust in the individual supplier, determine the level of control over the procurement of material resources based on the supplier rating. The relationship between the rating of the i^{th} supplier involved in partnership and the rating of the supplier with the best position indicates the priority of establishing strategic interaction as well as the effectiveness of the procurement subsystem. In terms of practical application of the supplier quality index, the accuracy of the rating scores for the i^{th} supplier and the supplier with the best position (standard) is less important than the gap between these values. This criterion should be key in solving the problem of vendor selection, establishing (prolonging) partnerships with them as well as in establishing interaction within the relationship management strategy.

3.3 ABC-VEN-analiz

The current analytical technology used to implement the relationship management strategy is the ranking of suppliers according to the ABC method in case of their large number. The indicator used to classify the units according to A, B and C groups is the share of material resources from individual suppliers in the total revenue of the material group as a whole. When examining the impact of corporate governance on revealing the data on risks, Jordanian researchers A. Alkurdi et al. recommend adding Group D which includes vendors selected for one-time collaboration in order to obtain a more accurate analysis (Alkurdi et al., 2019). Group A suppliers should be given the highest priority, especially if they represent less than 5% of the total number of company's vendors. However, Group B suppliers should also be paid attention to since they are promising candidates for being shifted to Group A. If Group A suppliers comprises enormously high percentage of the total number of suppliers (up to 50%), this means that there are no key vendors in the company and its resources are wasted. In this case, the relationship between the company and its suppliers is typically determined not by the profitability of the contacts, but by the closeness of the relationship between the suppliers' superiors and the company. Therefore, by grouping suppliers by the ABC method it is possible to clearly identify the place of individual ven-

dors in the supply system so as to ensure more effective cooperation with them without creating any risk to the activity of the company itself.

The information obtained by the ABC method requires the analytical data obtained by the VEN method that suggests grouping suppliers based on the following characteristics: the Vs (Vital) which supply “vital material resources”, the Es (Essential) which supply the necessary material resources, and the Ns (Non-essential), which supply the secondary material resources. In this case Vs include raw materials and other materials the availability of which is required to produce main products or new ones, or products the sale of which generates the highest income or attracts the largest part of consumers (products in A and X groups are categorized with the help of the ABC method and the XYZ analysis according to the product range classification). The Ns are made up by material resources that do not significantly affect the company turnover. In this case, the number of selection factors increases and the unambiguous choice gets complicated. In these circumstances, the method of selecting suppliers based on ranking is an effective one (Tab. 1). We offer an algorithm for the ABC-VEN analyses (Figure 5).

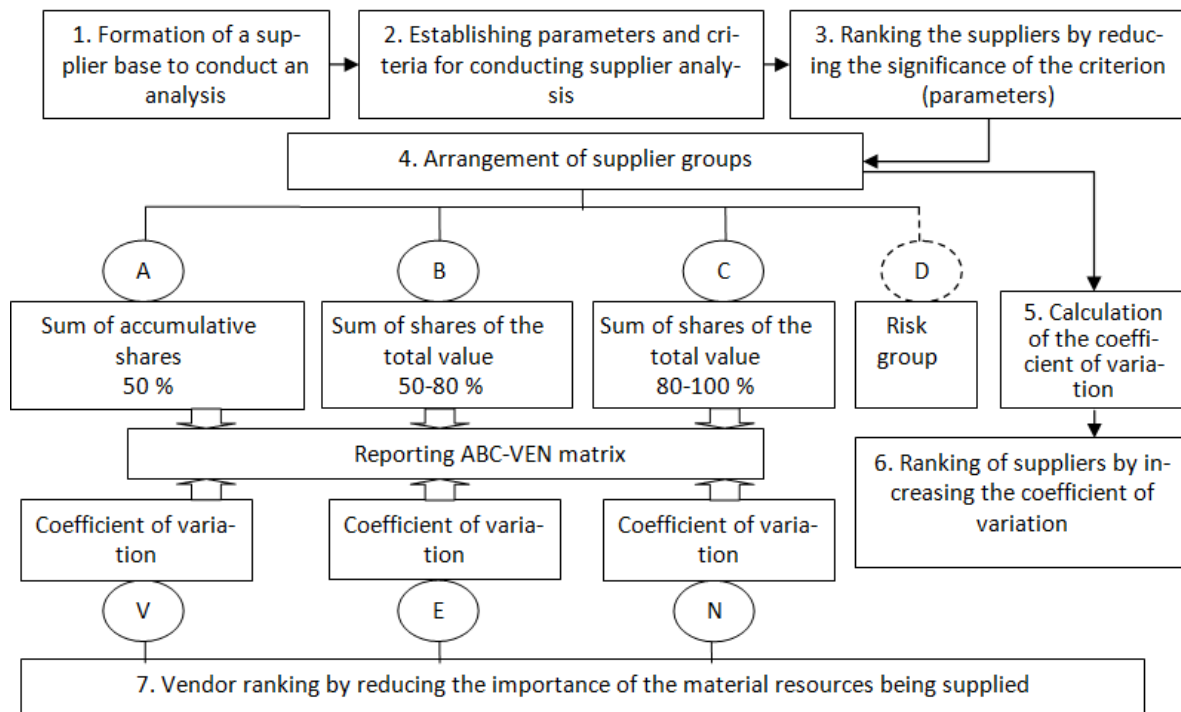


Figure 5. An algorithm for conducting a supplier analysis using the ABC- VEN methods

Source: authors

The matrix of estimates for the ABC-VEN-analysis results (Table. 2) is characterized by the quadrants: AV, VV, AE – the highest priority for maintaining and establishing or enhancing strategic engagement. SV, VE – high priority of the supplier that needs attention; CE – regular monitoring of the supplier; AH, BH – require accurate and prompt analysis and control; SN – the maximum risk.

Table 2. Reporting on the ABC-VEN matrix

Group / characteristic			The level of importance of the supplied material resources		
			V	E	N
			the most significant material resources	necessary material resources	material resources of secondary importance
The level of supplier importance	A	The most significant suppliers that require a detailed and continuous analysis, evaluation and control. The cost of materials and raw materials supplied comprises 60-70% of the total value, with the lowest number of counterparties in this group.	AV – the most important vendors with a high amount of continuous supplies of material resources that are important for the manufacture of the company's core product. Maximum dependency on the suppliers of this group; thus, they require constant detailed analyses and monitoring.	AE – the most significant suppliers characterized by unstable supplies of necessary material resources. They require accurate and prompt analyses and monitoring to establish strategic engagement.	AE – the most significant suppliers characterized by unstable supplies of nonessential material resources. They require accurate and prompt analyses and monitoring.
	B	Less valuable suppliers but more numerous (20-30% of total turnover). The counterparties of this group are monitored and selectively analyzed.	BV – stable supplies of important material resources. They require prompt analyses and monitoring to establish strategic engagement.	BE – stable supplies of moderately important material resources. They require prompt analyses and monitoring to establish strategic engagement.	BN – stable supplies of less important material resources. They require prompt analyses and monitoring in order to replace them.
	C	Suppliers with the lowest turnover (10-20% of total value). The largest group. Regarding the purpose of control and analysis, it is the least priority group.	CV – unstable supplies of important material resources. They require prompt analyses and monitoring to establish strategic engagement.	CE – unstable supplies of important material resources. They require monitoring.	CN – unstable supplies of less important material resources. They require monitoring.

Source: authors

In order to improve the SRM analytical provision system, primary diagnostics of the accounting system and analytical work in the company is required to determine the potential of the accounting and analytical complex, which lays the foundation for the use of innovative accounting and analytical technologies in solving the problems of supplier relationship management (Malik et al., 2019). The development and implementation of accounting procedures for collecting and monitoring the information on supply volumes, accounts receivable and payables, costs within the parameterized system of indicators included in the supplier relationship management (SRM) strategy makes it possible to submit this information in the form of management reporting for its further evaluation and analysis. The documentation on vendor evaluation reporting involves developing a format that will be convenient for the executives to make decisions. Thus, when developing recommendations for improving strategic management accounting and analysis to ensure the economic security of a business entity in the context of adaptation to market conditions, the developers have proposed a report format based on the results obtained through an analysis of suppliers of footwear companies (Tab. 3).

Table 3. Management reporting on the results of the company suppliers' analysis

#	Supplier Name	Complaints		The value of the supply contract, thsd €	Share in total supplies, %	ABC category	Rating score	Coefficient of variation	VEN category
		units	thsd €						
1	2	3	4	5	6	7	8	9	10
...
Total		57	452	50000	100%	-	-	-	-

Source: authors

The role of analytical information for SRM in the context of variable factors of economic environment is increasing. The use of innovative analytical technologies, modern accounting elements and complexes provides the enterprise with economic efficiency and competitiveness in a strategic perspective through

a combination of accounting, analytical, control information regarding suppliers when building the relationship management strategy.

Companies operate in a changing market environment. Therefore, interaction with suppliers involves not only their being evaluated but also re-evaluated. Compliance with the ISO 9001 requirements as for re-evaluation of material resource vendors allows companies to identify unreliable suppliers and determine the level of supply control. Re-evaluation of vendors helps prevent poor supplies, reduce the number of inappropriate products and consumer complaints. Establishing vendor re-evaluation criteria makes it possible to assess suppliers by applying the following impacts: from encouraging the best suppliers to refusing to cooperate with them in case they do not meet the standards of the supplier quality. The company has a right to set the criteria for evaluating and re-evaluating suppliers at its discretion. However, it is important to select those that will reveal the most complete picture of the supplier quality and provide more transparent management of the material flow (Table 4).

Table 4. Criteria and indicators for vendor re-evaluation

Rating value	The degree of company's trust in the supplier	The level of control over the products supplied
50-45	a reliable vendor that is recommended for strategic engagement	input control on the basis of supporting documents for the supplied product
45-35	an appropriate vendor that is recommended for strategic engagement	selective input control of the supplied products
35-25	a reliable vendor that is not recommended for strategic engagement	continuous input control of the supplied products
25	interaction with the supplier recommended in case of no alternative supplier option	continuous input control of the supplied products

Source: authors

Evaluation and re-evaluation of suppliers is a significant analytical tool in managing supplier relationships to optimize the supplier base, improve logistics chains, and develop and implement a cost strategy for the company. To describe innovative technologies for analytical provision while ensuring the implementation of a competitive business management strategy, D. Ramdani, I. Primiana recommend using a supply chain analysis (Ramdani et al., 2018). The impact of strategic orientation, organizational innovation capabilities and strategic planning on the performance of technology companies is analyzed by Rizan et al. (2019), who have argued that analytic support is important for identifying the targets that are tailored to stakeholder interests. In the context of the development of accounting and management support for companies. The research investigates supply chain management in total 613 SMEs of Canada, Iran and Turkey to explore SMEs practices in global context (Kot et al., 2020). Al-Arafati A. and Kadir K. A. evaluate the impact of product quality on the relationship between senior management support and customer satisfaction when implementing a customer relationship management system in the public sector (Al-Arafati et al., 2019). The theoretical researches and practical developments by these authors have expanded the methodological foundations and practical tools for managing a company with regard to stakeholder engagement. The need for innovative analytical tools in managing the company's sustainable development to strengthen relationships with suppliers has determined the topic of this research. At the same time, an important task for developers is to increase the competitiveness of companies by establishing strategic engagement with stakeholders.

The main provisions of this study have been put into practice when managing relationships with suppliers of manufacturing companies and received a positive assessment. The use of the ABC-VEN method provided the opportunity to apply the experience, insight and intuition of experts to form an information-analytical framework for managing the company's activities in terms of behavioral approach.

CONCLUSION

In terms of Industry 4.0, the market has a significant impact on companies. In order to maintain their viability and development, company executives must conduct business considering the strategic interac-

tion with key stakeholders. The use of innovative analytical technologies provides the creation of a relevant information complex when making managerial decisions on interacting with suppliers. An effective system for managing interaction with suppliers has been found to provide necessary conditions for creating long-term value, achieving strategic goals and building a positive reputation for the company. An approach to the analytical support for management should be based on identifying opportunities rather than their limitations. Therefore, the introduction of analytical tools in practice for continuous company management is aimed at developing company's opportunities which are as follows:

- comprehensive evaluation of the business environment, identifying new strategic opportunities,
- increasing trust between the company and vendors as stakeholders,
- improving the effectiveness of managerial activities,
- improving the company's image as a socially responsible business unit in the direction of ensuring socially responsible business.
- ensuring the sustainable development of the company.

Based on the research findings obtained by various scientists, we have expanded our analytical tools to establish strategic engagement with suppliers while ensuring the company's sustainable development within industry 4.0. In addition, engagement of key vendors (stakeholders) increases the company's resilience in an uncertain environment, which is particularly important in managing non-financial risks of the company's corporate social responsibility to stakeholders. The analysis of current global trends in the interaction of economic entities has allowed identifying the main risks and opportunities to ensure the realization of strategic economic interests of domestic companies. This made it possible to expand the use of analytical tools to manage the interaction with the suppliers who are key stakeholders of the company. An integral profile of strategic interaction of domestic companies with suppliers has been formed.

The use of analytical tools for evaluating suppliers provided an opportunity to develop an algorithm for analysing them with the help of the ABC-VEN method so as to generate information in the context of key groups of material resources and suppliers. The ABC analysis is recommended for use in deterministic systems. When solving multi-criteria problems, the method of additive convolution is recommended. Acceleration of environmental changes, emergence of new demands and changes in consumer positions, increased competition for resources, the development of information networks (which enable rapid dissemination and retrieval of information), widespread availability of modern technologies, and a number of other reasons have led to a sharp rise in the value of analytical technologies used to manage the company's activity. The use of the format suggested for management reporting based on the analysis of company suppliers provides an opportunity to summarize information for management purposes, extends the capabilities of the company's accounting and analytical system, and increases the importance of analysts.

Considering the fundamental importance, complexity and systematic nature of this problem, the authors' approaches to supplier evaluation contribute to improving the relationship management process, establishing strategic interaction with major suppliers, increasing the competitiveness and efficiency of the company as a whole. We emphasize that the results of this study is of current interest for generating relevant information so as to develop sustainable reporting provided by the G4 standard. The system of key performance indicators focuses on non-financial indicators, i.e. the effectiveness of internal business processes and supplier relationships. In view of this, we consider it advisable to supplement the Sustainability Reporting with analytical information that characterizes the effectiveness of the company's relationships with its suppliers.

The main results and provisions of the work can be used by the departments of strategic management, logistics, logistics and company leadership as applied tools in the development and implementation of the supplier relationship strategy. The findings of the study can be used to gain and strengthen a company's competitive advantage, since the effective and strategically verified supplier engagement can ensure the implementation of a procurement management strategy to support both the supply chain and achievement of goals of the entire logistics system of the company.

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