

THE ROLE OF QUALITY AND ENVIRONMENTAL MANAGEMENT SYSTEMS IN THE EVALUATION OF SUPPLIERS

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Abstract

The aim of this article is to present the role of the quality and environmental management systems in the evaluation of suppliers. This evaluation is perceived by many economic entities as one of the key stages of the sourcing process in the B2B market. The conducted analysis indicates that the evaluation of suppliers allows a significant reduction of the level of risk related to the quality of both products and processes. Activities undertaken by enterprises in the evaluation of suppliers were the subject of empirical research carried out between October and November 2017, through the use of the Computer Assisted Telephone Interview (CATI) technique. The research covered 300 producers that were suppliers for enterprises from the automotive, metal and chemical sectors. The results of the empirical research indicate that companies operating in Poland and wanting to shape partner relations with suppliers conduct their evaluation focused mainly on ensuring the quality of products, improvement of operational processes, as well as limiting the negative impact on the environment through the implementation of management system solutions.

Key words: supply chain, supplier relationship, quality and environmental management, supplier evaluation

1. INTRODUCTION

Building partner relationships on the B2B market is largely the result of the evolution from repeated transactions based on loyalty to the source of the purchase to a mutual trust between partners. If the parties are satisfied with the implementation of the provisions contained in these contracts, then such cooperation may develop into close partner relationships. These can lead to many mutual benefits, such as: improving product quality and service, shortening order fulfilment cycles, purchasing efficiencies, improved communication between the supplier and the recipient, joint

research and development as well as reduction of the negative impact of the supply chain on the environment. Observation of business practices shows that many enterprises when pre-evaluating and rating new suppliers, require them to implement the guidelines which are included in quality and environmental management standards. It is also noticeable that client companies evaluate suppliers through verification of their activities in terms of both quality and environmental management systems. The expansion of many companies, especially global corporations, increases the importance of technical standardization (to ensure the required quality) as well as quality and environmental management systems (especially in countries where investments are localized and relationships are established with local suppliers).

2. BUILDING RELATIONSHIP IN THE SUPPLY CHAIN – THE THEORETICAL BACKGROUND

Supply Chain Management is a fundamental concept of logistics that has evolved to enable organizations to improve their efficiency and effectiveness in the global, and highly competitive, environment in the twenty first century. This concept comprises processes connected with planning, completion and evaluation related to the flow of materials, equipment, information and human resources among organizations to ensure effective and fast delivery of tangible products and services between the supplier and the customer. Building a competitive advantage in the B2B sector is particularly linked to shaping the long-term partner relationships between companies, their customers and suppliers. An individualized, trust-based approach towards the establishment of contacts, interests and possibilities of cooperation allows the negotiation and execution of transactions beneficial for all parties (called win-win). The positive evaluation of these activities by the parties involved is essential in maintaining these relationships, and a sign of the readiness for further cooperation with partners, as each party can see a number of measurable benefits. Effective communication, in the form and content of communication meeting the expectations of each partner, is a pre-requisite in establishing such an atmosphere (Murphy & Sashi, 2018). The activities of multinational corporations (which introduced the concept of sustainable development) are heavily focused on collaboration with their partners in the supply chain (suppliers and customers). Large corporations are increasingly offering their support through joint ventures, such as deployment projects and operational improvement tools like quality and environmental management systems. Building partnerships with customers and suppliers can bring the supply chain many important benefits, such as:

- shortening the time necessary for new products to be brought to market (thereby reducing the associated costs);
- ensuring business continuity, together with the methodology developed for identification, analysis, and hazard mitigation (associated with the product and the processes implemented in the supply chain);
- increasing the flexibility, efficiency and effectiveness of the processes through efficient and rapid communication (aimed at forecasting demand, joint planning of

resource use; use of a compatible infrastructure and the use of operational improvement tools like quality and environmental management systems);

-promotion of ethics in economic activity through the avoidance of corruption, discrimination (using monopolistic practices), the discharge of contracts, compliance with regulatory requirements and design and analysis of product life cycle according to the guidelines contained in ISO standards series 14 040 (Mollenkopf & al., 2010; Goebel & al., 2012; Vahidi & al., 2018; Bastas & Liyanage, 2018; Prozman & Sacchi, 2018).

A partnership comprises a process in which the customer and the supplier gradually build strong and extensive social, economic and technical relationships. Creating partnerships usually is an evolution, beginning with repeated transactions based on loyalty to the source of the said purchase and on confidence related to the positive image of a particular partner. These repeated transactions often transform into long-term connections in which relations are regulated by agreements. If the parties are with the arrangements set out in the agreements, their cooperation may transform into a close partnership (Wagner, 2011). This may produce many benefits for the partners and these are: improved quality of products and services, prompter implementation of orders, preferential prices, improved communication between the supplier and the recipient (quicker and more complete exchange of information) and joint research and development. These benefits enhance the positive images of the partners. In some cases, a partnership between the supplier and the customer may transform into a strategic alliance which is based on joint achievement of specific long-term goals.

3. THE ROLE OF QUALITY AND ENVIRONMENTAL MANAGEMENT IN COOPERATION WITH SUPPLIERS

Building a healthy partnership with suppliers is dependent on clearly specifying the requirements that are to be met and on the efficiency of the tools employed to ensure these requirements are fulfilled, e.g. audits, supplier evaluation sheets based on an indicator analysis of the requirements in the area of technical quality, meeting deadlines, price competitiveness and providing services. Significant conditions shaping this partnership are the speed of information exchange and individualization of the approach, e.g. by means of requesting an ever wider range of services from the supplier and involvement in joint research and the development of new products. The most common organizational standard, used by companies to ensure the required quality and raise its level, to meet the growing expectations of buyers, are the guidelines contained in ISO 9001. The guidelines in ISO 9001 includes criteria for the implementation of operational processes (related to product design, purchasing, production, transportation, storage and delivery of goods and installation of equipment on site for the customer after the sale). The standardization of these processes is achieved through Standard Operating Procedures (SOP) and/or employee training programs, provision of resources (personnel qualifications, maintenance of facilities and environment), and the use of those monitoring and measurement methods which allow the expected quality level of the provided services to be reached

and improved. The selection of suppliers is usually preceded by an audit (Ruhrmann, & al., 2014). During the audit, clients place particular focus on the evaluation of the capacity of the suppliers. This assessment includes the following elements: infrastructure (buildings, equipment manufacturing) and maintenance and efficiency of IT equipment. The periodic classification of suppliers is carried out through continuous monitoring and measurement using indicators relating to the quality of the products and entrusted supply (no damage, theft, shortage), timeliness of delivery (no delays in deliveries), responsiveness to complaints, compliance with delivery of documents, and flexibility (the possibility of changes in the size and timing of deliveries). The evaluation audits performed at suppliers' plants by customers include more than just the verification of compliance with organizational standards requirements. Audits also encourage process improvement by reducing the level of risk, the risks associated with the quality of products, improving the environmental impact and exchange of information. Some international companies require regular reports on progress in the improvement of management systems from suppliers (Feedback Reports Cards), which contain data on cost reduction, reduction of non-compliance, improvement of efficiency and effectiveness indicator processes, reduction of energy consumption, a cutting of cycle times of processes, and optimization of capacity utilization. More and more customers on the B2B market, before starting collaboration with suppliers, also take into account the introduction of environmental management standards based on the monitoring of environmental aspects. These standards emphasize the objectives (based on the environmental aspects) and programs to improve the impact on the environment, as well as legal compliance in this area. During the audit suppliers are assessed for compliance with the requirements of international environmental management standards ISO series 14000 and legal requirements for the protection of the environment, in particular Directives of the European Union (Fuentes-Fuentes et al., 2011; Castka & Balzarova, 2018). Many companies also assess suppliers on the basis of their level of management focusing on the requirements conforming to ISO 9001 and ISO 14001. International companies commonly publish their own holistic requirements (in the form of Supplier Quality Requirements Manuals, Supplier Quality and Excellence Manuals, Customer-Specific Requirements) which are relevant to a wider range than those of the international standards. The clients' compliance with these requirements is verified through audits and self-assessment of suppliers. A number of international companies require regular reports on progress in improvement of management systems while monitoring suppliers. They also regularly monitor them by means of Performance Feedback Reports Cards, which contain data on lowering costs, reducing incompatibility, improving effectiveness indicators and process efficiency indicators, reducing energy consumption, shorter cycles of process completion, and optimization of using production capabilities. The above-described behaviour may be presented as a cycle of constant improvement. Companies implementing management systems which conform to organisational standards far more often complete Performance Feedback Reports Cards and use periodic evaluation indicators as well as audit their business partners when shaping their relations with suppliers compared to companies which do not implement systems of this type. They also require that bidders implement quality management systems and, with increasing regularity, an

environmental management system. Observing world trends, one may easily notice that suppliers are now being monitored from the point of view of meeting sustainable development based on the concept of the Global Compact (Grimm et al., 2016; Gören, 2018). Creating partnerships with supplier allows the recipient on the B2B market to transform commercial cooperation into various types of alliances and, thus, gain a range of benefits:

- time saving connected with choosing a supply source;
- reduced risk which is connected with choosing a new supplier or buying a new product (brand);
- quicker and more effective flow of market information;
- joint solving of technical and organisational problems, which allows greater effectiveness of using resources in process enhancement (Lintukangas et al., 2016; Torres-Ruiz & Ravindran, 2018).

Institutional clients (especially producers) are routinely beginning to concentrate on the evaluation of key suppliers, shaping long-term relationships with them based on the advancement of the technical quality of product solutions (running research and development projects together), and reliability of deliveries (based both on their flexibility and shortening of the order cycle). These actions, executed by both sides, lead to decreasing costs (Arumugem et al., 2011; Garfamy, 2011). Japanese companies such as Toshiba, Sharp, Mazda (Green Procurement Guidelines), Canon, Kyocera (Green Procurement Standards), Fujitsu (Green Procurement Directions), Sony (Green Purchasing Standards), NEC (Green Procurement Policies) have introduced specific requirements for the protection of the environment including developing detailed guidelines for suppliers. These standards are imposed on suppliers through clauses included in contracts. They develop their own standards and provide both general guidelines for pre-qualification of suppliers as well as periodic evaluation. Evaluation criteria focus mainly on three crucial parameters, known under the acronym QCD (Quality-Cost-Delivery). For quality assessment, the issue mainly concerns the technical quality of the solutions for customers (number of defective goods, reported claims). With regard to costs, customers focus not only on the price of the purchased goods, but also on additional benefits (such as free shipping, warranty, maintenance services), product performance and incurred expenditures for the current operation (like energy consumption, replacement parts). In assessing the performance of delivery, customers take into account the timeliness, completeness, and flexibility when changing the conditions of delivery. Many companies extend their criteria for evaluating suppliers with such items as: innovation, offered services, approach to management, and compliance with best practices in the field of ethical conduct. For example, Texas Instruments evaluates its suppliers according to the formula CETRAQ, which is an acronym of the main criteria, which include: the *cost* of purchase, operation aimed at protecting the *environment* and safety (environment, health and safety management system), modern *technology*, social *responsibility*, *assurance* of supply and *quality* of supply (Texas Instruments, 2012). The 3M company evaluate their contractors according to the formula TQRDC, which includes: the use of modern *technology*, the technical *quality* of the products, social *responsibility*, on-time *delivery*, and also ability to reduce *costs* (3M, 2014). Similarly, LG Electronics makes progress in this area by basing its evaluation on the

formula TQRDCME. The scope of this assessment includes: modern *technology*, the technical *quality* of products, the implementation of the concept of corporate social *responsibility*, on-time *delivery*, *cost* efficiency, implementation of *management* systems, as well as the positive impact on the *environment* (LG, 2009).

4. THE METHODOLOGY AND RESULTS OF EMPIRICAL RESEARCH AND DISCUSSION

Criteria for initial and periodic evaluation of suppliers were the subject of empirical research carried out between October and November 2017, through the of the Computer Assisted Telephone Interview (CATI) technique. The research covered 300 producers that were suppliers from enterprises from the automotive, metal and chemical sectors. The selection criteria have been assigned a score on a scale from 5 (the most important criterion) to 1 (least significant). The study was commissioned to a specialized research agency, which then made a targeted selection of companies registered in the Kompas database, a search platform of business directories. The criteria of initial and periodic evaluation of suppliers were establish during focus group study with quality and environmental managers who participated postgraduate studies at Faculty of Management of Lodz University.

The results of the conducted research show that when making the initial supplier selection enterprises are guided mainly by such criteria as: delivery times, favorable pricing conditions, the technical quality of the product (meeting the required specifications), as well as the scope of warranty obligations. The supplier's production capacity, implementation of a quality management system (QMS), the scope of after-sales services (product installation, technical consulting), the financial state of the supplier as well as the modernity of product solutions are also important criteria for the selection of business entities that are sources of supply. Least important were: references / recommendations, the range of offered of after-sales services and implementation of an environmental management system (EMS). Detailed results of the research are presented in the tables 1, 2 and 3 Analyzing the detailed research results and differences between the individual segments, it is noticeable that the declared time of deliveries is of particular importance for enterprises with Polish capital and large producers from the metal and chemical sectors. In turn, favorable price conditions are particularly important for small and medium-sized business entities with domestic capital as well as for producers of metal and chemical products. The technical quality of the product is highly important for large enterprises with Polish capital and for companies from the automotive and chemical sectors. For the same segments of companies, the scope of warranty obligations, production capacity and the implementation of the quality management system are also key. The implementation of the environmental management system is of great importance for business entities with foreign capital operating in the automotive sector.

The results of the conducted research show that when making the periodic assessment of supplier, enterprises are guided mainly by such criteria as: the technical quality of products (no defectiveness), response speed to orders, cost reductions by the supplier, improvement of the quality management system and delivery times. The

improvement of the environmental management system as well as shortening the cycles of order fulfillment are also important criteria for the evaluation of supplier performance, whereas the least important was product innovation of suppliers. Analyzing the detailed research results and differences between the individual segments, it can be seen that the technical quality of products (no defectiveness), response speed to orders, cost reduction by the supplier, delivery times, improvement of the environmental management systems and shortening the cycles of order fulfillment are of particular importance for enterprises with Polish capital. On the other hand, for companies with foreign capital the improvement of the quality management system as well as product innovation of suppliers are more important. Detailed results of the research are presented in the tables 4, 5 and 6:

Table 1. The importance of the suppliers' initial evaluation criteria (general results and a comparison between the segments depending on the capital, rank correlations)

Criteria	General N=300	Capital	
		Polish N=120	Foreign N=180
Delivery times	4.006667	4.216667	3.866667
Favorable price conditions	3.906667	4.025000	3.827778
Technical quality of the product	3.633333	3.875000	3.472222
Scope of guarantee obligations	3.546667	3.608333	3.505556
Implementation of a QMS	3.463333	3.641667	3.344444
Financial condition of the supplier	3.263333	3.283333	3.250000
Implementation of an EMS	3.000000	2.916667	3.055556

Source: Results of empirical study carried out by Maciej Urbaniak, 2017

Table 2. The importance of the suppliers' initial evaluation criteria (comparison between the segments depending on the number of employees, rank correlations)

Criteria	Number of employees	
	-250 N=223	251- N=77
Delivery times	3.982063	4.077922
Favorable price conditions	3.937220	3.818182
Technical quality of the product	3.609865	3.701299
Scope of guarantee obligations	3.529148	3.597403
Implementation of a QMS	3.426009	3.571429

Financial condition of the supplier	3.233184	3.350649
Implementation of an EMS	2.941704	3.168831

Source: Results of empirical study conducted by Maciej Urbaniak, 2017

Table 3. The importance of the suppliers' initial evaluation criteria (comparison between the segments depending on the number of the sector, rank correlations)

Criteria	Sector		
	Automotive N=99	Metal N=104	Chemical N=97
Delivery times	3.878788	4.057692	4.082474
Favorable price conditions	3.787879	3.903846	4.030928
Technical quality of the product	3.636364	3.346154	3.938144
Scope of guarantee obligations	3.585859	3.346154	3.721649
Supplier's production capacity	3.545455	3.298077	3.628866
Implementation of a QMS	3.494949	3.288462	3.618557
Financial condition of the supplier	3.282828	3.201923	3.309278
Implementation of an EMS	3.323232	2.913462	2.762887

Source: Results of empirical study conducted by Maciej Urbaniak, 2017

The results of the conducted research show that when making the periodic assessment of supplier, enterprises are guided mainly by such criteria as: the technical quality of products (no defectiveness), response speed to orders, cost reductions by the supplier, improvement of the quality management system and delivery times. The improvement of the environmental management system as well as shortening the cycles of order fulfillment are also important criteria for the evaluation of supplier performance. Analyzing the detailed research results and differences between the individual segments, it can be seen that the technical quality of products (no defectiveness), response speed to orders, cost reduction by the supplier, delivery times, improvement of the environmental management systems and shortening the cycles of order fulfillment are of particular importance for enterprises with Polish capital. On the other hand, for companies with foreign capital the improvement of the quality management system is more important. Detailed results of the research are presented in the tables 4, 5 and 6:

Table 4. The importance of the suppliers' periodic assessment criteria (general results and a comparison between the segments depending on the capital, rank correlations)

Criteria	General N=300	Capital	
		Polish N=120	Foreign N=180
Technical quality of products (no defectiveness)	3.830000	3.916667	3.772222
Response speed to orders	3.776667	3.908333	3.688889
Cost reduction by the supplier	3.613333	3.708333	3.550000
Improvement of the QMS	3.593333	3.550000	3.622222
Delivery times	3.560000	3.650000	3.500000
Improvement of the EMS	3.333333	3.383333	3.300000
Shortening the cycles of order fulfillment	3.260000	3.308333	3.227778

Source: Results of empirical study carried out by Maciej Urbaniak, 2017

Table 5. The importance of the suppliers' periodic assessment criteria (general results and a comparison between the segments depending on the number of employees, rank correlations)

Criteria	Number of employees	
	-250 N=223	251- N=77
Technical quality of products (no defectiveness)	3.717489	4.155844
Response speed to orders	3.730942	3.909091
Cost reduction by the supplier	3.672646	3.441558
Improvement of the QMS	3.529148	3.779221
Delivery times	3.515695	3.688312
Improvement of the EMS	3.304933	3.415584
Shortening the cycles of order fulfillment	3.331839	3.051948

Source: Results of empirical study conducted by Maciej Urbaniak, 2017

Large companies, when evaluating suppliers, focus more on the technical quality of products (no defectiveness), response speed to orders, improvement of the quality and environmental management system, delivery times and product innovation of suppliers. Cost reduction by the supplier and shortening the cycles of order fulfillment are particularly important for small and medium-sized business entities.

Table 6. The importance of the suppliers' periodic assessment criteria (general results and a comparison between the segments depending on the sector, rank correlations)

Criteria	Sector		
	Automotive N=99	Metal N=104	Chemical N=97
Technical quality of products (no defectiveness)	3.757576	3.692308	4.051546
Response speed to orders	3.767677	3.875000	3.680412
Cost reduction by the supplier	3.742268	3.557692	3.545455
Improvement of the QMS	3.653846	3.565657	3.556701
Delivery times	3.742268	3.451923	3.494949
Improvement of the EMS	3.404040	3.230769	3.371134
Shortening the cycles of order fulfillment	3.373737	3.134615	3.278351

Source: Results of empirical study conducted by Maciej Urbaniak, 2017

When assessing suppliers of companies from the chemical sector, special focus is on ensuring the security of technical quality of products. Response speed to orders as a supplier evaluation criterion is a priority for enterprises from the metal sector. For the companies from the automotive sector of particular importance in the suppliers' evaluation criteria are reducing costs by the supplier, improvement of the quality and environmental management systems, delivery times, shortening the cycles of order fulfillment and product innovation of suppliers.

5. SUPPLIER DEVELOPMENT PROGRAMS

Many international companies when taking steps to improve their processes and products also involve their suppliers in the implementation of process and product improvement tools by offering special support programs based on the principle of win-win (Chavhan et al., 2012; Omurca, 2013). Supplier development programs are implemented through joint projects aimed at introducing new or improving existing products. The successful implementation of these programs sometimes requires companies to equip partners with the necessary infrastructure and technology (Arroyo-López et al., 2012; Ahmed & Hendry, 2012). In practice, it is visible that supplier development programs can be of short and medium term (reactive, focusing largely on eliminating the current problems) or long term (strategic, based on a strong integration partnership). They can focus on activities aimed at ensuring and improving the quality of products or the provision and improvement of the process quality. These programs can also be aimed at providing basic or specialized support activities to improve products and processes (Song & Benedetto, 2008; Mishra & Patel, 2010). The successful implementation of these programs allows both suppliers and customers

to improve the quality of products (lower level of non-compliance, introduce product innovations, increase reliability and security), shorten cycle processes and reduce their costs (in particular with regard to operational processes such as design, customer service before and after the sale, production/services, transportation and maintenance of infrastructure) and improve mutual communication (Bai & Sarkis, 2011; Fu et al., 2012). Actions aimed at developing suppliers undoubtedly contribute to a reduction in transaction costs related to the exploration of new supply capacity, conducting audits and other forms of assessment, verification and qualification of the sources of purchase (Nagati & Rebolledo, 2013). In order to ensure the effectiveness of a supplier development program, it is necessary to produce a climate of cooperation based on mutual commitment, trust and open information exchange, especially in the area of performance quality (level of compliance with the requirements for the provision and improvement of products and processes) and cost (access to financial data relating to joint ventures). Effectively implemented, the development programs of suppliers undoubtedly contribute to building the intellectual capital of the partners (Krause et al., 2007; Dombrowski & Karl, 2016).

6. THE TRENDS IN BUILDING RELATIONSHIPS IN THE SUPPLY CHAIN

Observing world trends, one may clearly observe that suppliers have begun monitoring the ability to meet the sustainable development requirements: from an economic aspect (demanding high technical quality, delivery reliability, price competitiveness, technical support), and often also from an environmental and social aspect (principles based on the concept of the Global Compact). An example is the emphasis put on environment protection requirements by Japanese firms which have implemented detailed guidelines for their suppliers. Many international companies more frequently require from their suppliers detailed evidence defining environmental goals, documentation, activities aimed at limiting the consumption of resources, employee training, reducing factors harmful to the environment resulting from processes (e.g. gas emission, noise, vibration, waste), and disseminating information on performance connected with environmental protection (Gunasekaran & Spalanzani, 2012; Hoejmose & Adrien-Kirby, 2012; Tate et al., 2012; Yawar & Seuring, 2018). When carrying out audits aimed at the evaluation of the functioning of suppliers' environmental management, attention is most often paid to the following elements:

- environmental culture, which is connected with adopting an environmental policy, identification of environmental aspects and defining environmental goals and tasks;
- adhering to laws concerning environmental protection;
- supervising the system of environmental management by means of ensuring appropriate documentation (procedures, instructions, records) and resources (infrastructure, process technology, information systems, appropriately qualified employees) as well as employing environmental indicators (e.g. those related to energy consumption, natural resources, the waste economy and pollution);
- internal and external communication;

- employee training;
- cooperation with suppliers in the area of environmental management establishing criteria for the evaluation of suppliers from the point of view of their environmental operations.

When signing contracts with suppliers, a sizeable proportion of international companies insist on the signing of statements according to which they will be obliged to adopt principles included in clauses of so-called business practices (Statements on Business Practices). These enterprises often issue special behaviour and ethical rules for their suppliers (Supplier Conduct Principles, Principles and Standards of Ethical Supply Management Conduct) as well as guidelines in respect of their implementation (Supply Chain CSR Deployment Guidebook. Purchasing Way), organize programs (Supply Chain Social Responsibility Programs), introduce projects (Supplier Responsibility Projects) and draft control lists (Supply Chain CSR Checklist) used, for instance, for the self-assessment of contractors (Kumar et al, 2014). Statements on Business Practices are connected with, among others, business operations accompanied by scrupulous observation of all binding laws and ethical standards, avoiding corruption practices and combatting attempts to bribe domestic and foreign institutions' employees, avoiding employee discrimination, protection of international human rights and responsibility for the environment. It is worth noting that these requirements are not imposed on one party only (by means of forcing suppliers to meet them). More and more companies attempt to shape their image as a reliable partner (customer) and therefore draw up purchasing codes of ethics or customer and supplier good practice guides (Foerstl et al., 2010; Goebel et al., 2012; Winter & Lasch, 2016; Höänninen & Karjaluoto, 2017).

7. CONCLUSION

Recapitulating both the results of literature research and empirical studies, it should be noted that the implementation of quality and environmental management systems is an important criterion for the assessment of suppliers. Implementation of these systems. The implementation of these systems undoubtedly contributes to ensuring the technical quality and environmental performance of the expected products.

Observing world trends, one could notice that multinational corporations, since they invest in many countries around the world, do not focus on just a few selected sources of purchases but are increasingly diversifying, seeking to establish links with local suppliers. The starting point in building these relations is the pre-qualification of potential partners based on multi-criteria evaluation methods. These are often more important than price attributes as they are required to guarantee the quality of technical and organizational support (based on the standardization and security products and processes), and the timeliness of deliveries, flexibility to the requirements of buyers, and reducing the burden on the environment. An important role in building these relationships is played by the initial and periodic evaluation of suppliers. A significant criterion in this assessment is the implementation and improvement of quality and environmental management systems by suppliers. Positive results of the evaluation of

the implementation and improvement of these systems may result in long-term relationships.

It should be noted that B2B market buyers define customized requirements to their suppliers through detailed specifications which determine not only issues related to ensuring quality management (ensuring technical quality), but are also related to the increase in organizational efficiency (shortening implementation cycles), efficiency (cost reduction), safety (working conditions, information management), reducing any negative impact on the environment, and the implementation of product and process innovations (Wiengarten & Pagell, 2012; Gören, 2018). This approach is an important incentive for companies to improve the quality and environmental management systems by introducing ISO organizational standards. The actions taken by a company in the field of continuous improvement has a significant impact on ongoing globalization. The international expansion of many companies, especially global companies, increases the importance of technical standardization (to ensure the consistent quality required), and organization standardization. This is particularly important in countries where investments are located due to lower labour costs, like Central and Eastern Europe and Asia. In these countries, a perceivable gap in organizational solutions may exist between international corporations and indigenous businesses. In many cases this gap is overcome by the introduction of the concept of sustainable development. International companies that implement this concept focus on cooperation with their partners in the supply chain (suppliers and customers) and offering them support through joint projects. These initiatives are aimed at improving common processes and developing concepts for new products.

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