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MARIUSZ CHMIELEWSKI

mariusz.chmielewski@ug.edu.pl
University of Gdańsk. Faculty of Management
101 Armii Krajowej St., 81-824 Sopot, Poland
ORCID ID: https://orcid.org/0000-0002-0775-621X

EWA MALINOWSKA

ewa.malinowska@ug.edu.pl
University of Gdańsk. Faculty of Management
101 Armii Krajowej St., 81-824 Sopot, Poland
ORCID ID: https://orcid.org/0000-0002-9409-7856

Quality Costs as a Determinant of Company Value

Keywords: quality costs; enterprise value; enterprise competitiveness; operating profit margin

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Abstract

Theoretical background: Every enterprise generates costs when carrying out its activities. The costs associated with maintaining an adequate level of quality can prove to be not only a destroyer but, over the longer term, also a generator of enterprise value.
Purpose of the article: The aim of the paper is an attempt to present the impact of the quality costs identified by the company on enterprise value, as well as the conditions that should be met to observe an increase in its value.
Research methods: This study is of a theoretical nature and uses a research approach based on an analysis of the available literature and heuristic methods.
Main findings: Quality costs have an impact on the creation of enterprise value. An indication of their share in the costs by type can help the company's decisions, which, in the long term, can contribute to the enterprise value by increasing the cash flow.

Introduction

According to the social sciences, the essence of the functioning of any organisation is the awareness of principles, rules and objectives, which are realised through a variety of resources used by the most important one – people organised according to a formal organisational structure. This principle also applies to business entities. As per the concept of Value Based Management (VBM) developed at the end of the 1980s, the main objective of the functioning of any enterprise is to maximise in the long term its market value. An important factor in VBM is the identification of the factors and activities that influence company value growth. Years of research in the literature have identified a whole range of factors and activities whose changes affect both the growth of enterprise value (generators/creators of value) and the decline of enterprise value (destructors of value). The purpose of this paper is an attempt to present the impact of quality costs identified by the enterprise on the increase or decrease of selected parameters affecting its value.

At the same time, an effort has been made to indicate the conditions that must be met for the identified parameters to work towards an increase in company value rather than a decrease in its value. Achieving the objective of this paper required an analysis of the literature on value-based management and heuristic research to identify and indicate conditions that should be met for quality costs to be an enterprise value driver.

Literature review

The concept of value is used in various scientific disciplines – also in the social ones. According to Łobocki, value "is everything that is considered important and valuable for the individual and society and is worthy of desire, which is connected with positive experiences and is also the goal of human aspirations" (Łobocki, 1993, p. 125). Such a definition indicates that the concept of value can be applied not only to different disciplines, but also to various subjects. In the case of the economic sciences, it can refer to the value of an entire industry as well as to the value of a single enterprise, or, looking further afield, to a single project carried out by that enterprise, or to products that represent value to the customers. In each of these cases, different types of values are involved, and their determination proceeds according to the type of stakeholders. In the second half of the 20th century, a management concept based on the notion of enterprise value – Value Based Management – has been developed, where the perspective of the most important stakeholder group – the owners – is considered and the primary objective of the company's activities is to increase its value, understood as the owners' wealth (Czekaj & Dresler, 1998, p. 14; Gruszecki, 2002, p. 82). A company managed according to the VBM concept should carry out appropriate activities to achieve the objective defined as an increase in enterprise

value in the long term. These can be activities concerning both the business entity itself and its environment. Table 1 presents selected activities taken into consideration in the literature that enable the implementation and realisation of the VBM concept in an enterprise.

Table 1. Elements of the enterprise VBM process

Author	Enterprise VBM activities
Rappaport (1999, p. 181 ff.)	– strategic planning – reviewing the allocation of existing resources – measuring and evaluating financial performance – remuneration system based on financial incentives – effective communication with investors
Copeland et al. (1997, p. 101 ff.)	– setting business objectives – developing a goal-oriented action strategy – setting up action plans and budgets for their implementation – designing performance measurement and employee motivation systems
Black et al. (2000, p. 28 ff.)	– setting up objectives and an enterprise value-oriented strategy – allocating available resources in line with the strategy defined – entity performance-oriented management – communication with the environment regarding changes in values – motivating employees
Morin and Jarell (2001, p. 46 ff.)	– defining business objectives – using strategic planning – implementing a performance measurement system – proper allocation of resources – developing a remuneration system that motivates employees to achieve company objectives
Knight (1998, p. 112 ff.)	– planning – budgeting – drafting and publishing reports (monitoring the implementation of budgets) – rewarding the results achieved
Cyert and March (1992, p. 52 ff.)	– achieving the planned level of production – maintaining a level of supply that ensures smooth production and stock security – meeting the sales target – maintaining and increasing market share – profit
Michalski (2001, p. 148 ff.)	– drawing up a value maximisation plan – setting objectives and actions to achieve them – shaping the monitoring system for achieving the objectives – monitoring the implementation of the results achieved – shaping an incentive system to facilitate the achievement of objectives – effective communication both internal and external
Woźniak-Sobczak (2011, p. 134 ff.)	– activities at strategic level in the areas of investment, financing, production, and sales – activities at the tactical and operational level concerning financial health, current assets, production, and sales

Source: Literature provided in the table.

An analysis of the measures proposed by the various authors and leading to an increase in enterprise value shows that they are significantly similar. All of them directly or indirectly suggest the development of a long-term strategy for the company as the

basis for value growth – enterprise value creation should be a well-thought-out and planned activity. Most authors also draw attention to the need of communication with the environment. Rappaport points to communication being primarily investor-oriented, i.e. the owners of the enterprise, who can be counted among the main stakeholders of any business entity – they are the ones who commit their financial resources to its activities. As the concept has developed, efforts have been made to include more stakeholder groups. Undoubtedly, the implementation of the VBM concept depends on the specifics of the enterprise, including elements relating to both the enterprise itself and its environment, e.g.: industry, organisational structure of the enterprise, its size, competition, employee qualifications, etc. The implementation of the VBM concept is undoubtedly a process, and once it has been implemented, activities aimed at increasing the enterprise value must be continued. Effective process implementation requires the development of metrics against which the performance of the process under analysis can be assessed. To be able to construct such metrics, it is necessary to identify the factors that can directly or indirectly affect company value. The most popular identification of factors influencing enterprise value creation has been presented by Rappaport in the 1980s (Rappaport, 1999, pp. 64–69). In his model, he distinguished seven basic factors/determinants affecting enterprise value, namely:

– sales growth rate,
– operating profit margin,
– investments in working capital,
– investments in fixed assets,
– cost of capital,
– income tax rate paid in cash,
– period of competitive advantage.

It should be noted that most (six out of seven) of the value determinants proposed by Rappaport are financial in nature and can be derived from the financial statements of the business entity. Only the last factor (period of competitive advantage) is non-financial in nature.

The factors proposed by Rappaport are commonly referred to as enterprise value generators – but it should be noted that they can affect value as both a generator or a destructor, and this depends on the direction of change of these factors. Rappaport's proposed set of factors influencing enterprise value was one of the first identifications of parameters influencing such value and was based on a model for estimating it. This model identified only the factors that directly affect enterprise value, that is, their observation and control would make it possible to control the value of an economic entity. As the concept of VBM developed, an increasing number of factors influencing both direct and indirect enterprise value have been identified, including non-financial ones. A broader classification of factors influencing enterprise value has been presented by Marcinkowska (2000, p. 38), dividing these factors into two main groups:

– factors related to financial statements,
– factors not related to financial statements.

Within the first group, she identified the following factors:
– unrecognised assets,
– undervalued assets or overvalued liabilities,
– synergy effects,
– cost of capital,
– profitability,
– risk,
– enterprise development.

Marcinkowska's proposed factors related to financial statements overlap with the factors of a financial nature proposed by Rappaport. Undoubtedly valuable for Marcinkowska's classification is the indication also of factors outside the financial statements, which she divided into two groups:

– external factors: location, access to natural resources, weak competition, infrastructure development, owners,

– internal factors: human capital, intellectual capital, organisational culture, vision, mission, loyal customers, product, innovation, technological process secrecy, brand, trademarks, information systems, strategic alliances, environmental impact, effective advertising, public relations.

The factors outside the financial statements proposed by Marcinkowska influence the competitiveness of the economic entity. Thus, this classification can be considered a refinement of the approach proposed by Rappaport, by a precise indication of the parameters affecting the competitiveness of the economic entity. At the beginning of the 21st century, the consulting firm Deloitte, based on its activities, drew up a map of enterprise value, in which it identified more than 400 factors and activities that determine the enterprise's value. These include both value-increasing activities (value generators) and value-decreasing factors (value destructors).

It should be noted that the individual factors interact with each other and have different strengths of impact on enterprise value. Jeżak (1998, p. 288) attempted to estimate the strength of the impact of the individual factors proposed by Rappaport on enterprise value (Table 2).

Table 2. Strength of impact of individual factors on shareholder value growth

Factor determining enterprise value	Change in the factor determining enterprise value	Change in enterprise value
Operating profit margin	+1%	+23%
Period of competitive advantage	+1%	+17%
Sales revenue dynamics	+1%	+12%
Weighted average cost of capital	-1%	+10%
Net working capital (NWC)	-1%	+7%
Investments	-1%	+5%
Effective tax rate (on income)	-1%	+2%

Source: (Jeżak, 1998, p. 288).

All factors presented in Table 2 are ranked according to decreasing strength of impact on enterprise value. The degree of impact on enterprise value of changes in individual value determinants will undoubtedly vary from one enterprise to another. These values will depend not only on the parameters of the enterprise under analysis (e.g. the size of the business entity in question, the culture of the organisation in question) but also on its environment (e.g. the specifics of the industry in which the business entity operates). Analysis of individual companies may show that in some cases other factors have a stronger impact on enterprise value, e.g. referring to the classification proposed by Jeżak, the weighted average cost of capital may have a stronger impact on enterprise value than sales revenue dynamics. Within the framework of the proposed classification of impacts, it seems important to identify the factors that should have the greatest impact on enterprise value. According to Jeżak, the factor affecting enterprise value to the greatest extent is the operating profit margin, which is the ratio of operating profit to the enterprise's operating income. Considering such a hierarchy of factors affecting value, it is possible to identify financial parameters that will have a significant impact on enterprise value. Undoubtedly, these will include the costs of the company's operating activities – they both affect the company's operating profit and, being the basis for price determination, influence sales revenue dynamics.

The activities of companies are aimed at improving their financial performance, which is directly influenced by the demand for the products or services offered by the company. Among the factors that regulate the increase or decrease in demand is quality, which is defined as "the degree to which a set of inherent characteristics of an object fulfils requirements" (PN-EN ISO 9000:2015-10, 2015, p. 22). A customer who is satisfied with the quality of the products and services offered contributes to an increase in sales, which has an indirect effect on increasing the enterprise value. Obtaining an appropriate level of customer satisfaction involves incurring several costs. Among these, there are also those that are directly or indirectly related to the pro-quality measures implemented by the enterprise to achieve the assumed level of quality and maintain it during the course of business. In practice, it is possible to find companies that have processes in place within formalised management systems and those that have individually set up a framework of pro-quality activities to help them improve customer satisfaction. Regardless of the way in which quality measures are organised, every enterprise bears the costs associated with implementing, maintaining and improving quality. These are the costs normally incurred by an enterprise but are specifically identified and recorded in specially prepared off-balance-sheet accounts. As early as in the middle of the 20th century, it was noted that it is important to keep records of the costs associated with a company's pro-quality activities (Karaszewski, 2005, p. 50). A standardised snapshot of the company's financial status allows it to present its situation in the competitive environment. Keeping records of quality-related costs can be an additional asset used in enterprise value-based management, as this can help identify the impact of particular groups of quality costs on enterprise value generators.

The concept of quality costs has been around in the literature since the 1940s (Hellman & Liu, 2013, p. 104), while a variety of ways of defining this concept can now be observed (cf. Juran & Gryna, 1974, p. 69; Yang, 2008, p. 175; Wood, 2007, p. 3; Dale & Plunkett, 1995, p. 262). In the most general terms, it can be said that these are the costs associated with quality assurance or non-quality assurance activities. This definition derives from the picture presented by quality cost classification models, according to which quality costs are divided into (Schiffauerova & Thomson, 2006, p. 647):

– costs of compliance, which include prevention costs incurred during activities aimed at eliminating the possibility of future errors, and assessment costs incurred during the evaluation of quality implementation and maintenance activities,

– costs of noncompliance that result from the expenses incurred because of the occurrence of noncompliance, which has the effect of reducing the level of quality within the organisation (internal costs of noncompliance) and outside the organisation (external costs of noncompliance).

The identification and recording of quality costs is voluntary. Enterprises that decide to implement quality costs calculation have full freedom in the manner of conducting activities connected with it. They can also freely determine the area of company activity, which is to be included in the records of quality costs.

An enterprise that decides to monitor quality costs must independently identify and classify them according to the form of activity and the type of processes taking place in the enterprise, as well as its own needs within the framework of quality improvement. To this end, it is necessary to identify all activities that have anything to do with planning, implementing, organising and maintaining quality. This is not easy, as very often only a certain part of a given activity is related to quality assurance. In such a case, it is necessary to determine what proportion of the cost of a given activity will be attributable to quality-related activities. Another problem may be that there is no direct valuation of the cost in question (e.g. a decline/increase in the company's reputation), in which case an estimate of the cost should be made.

It should be remembered that the scope and detail of quality costs calculations should be tailored to the needs of the enterprise. It is important that the quality costs calculation provides enough information that the cost of the way in which this information has been obtained exceeds the cost of implementing and maintaining the quality costs calculation.

With a properly structured quality costs calculation, it is possible to find the cause-and-effect relationships that occur between a company's activities and the value of the quality level (Sadkowski & Jedynak, 2022, p. 195). It is possible to determine the value of the quality level, to estimate how much high-quality costs and what losses are incurred due to the occurrence of a low-quality level.

Research method

Companies wishing to sell their products or services need to ensure that they have the right level of quality to suit customers. It is important to bear in mind that quality assurance is associated with costs. At a given point in time, they represent a burden for the company, whereas in subsequent reporting periods they may contribute to increasing customer satisfaction and, consequently, sales volumes. The information on the elements affecting the company's value can be found in the literature (Daunoriene & Katiliute, 2016, p. 119; Browning, 2003, p. 49). Therefore, the research problem in this paper is to try to answer the following questions:

1. Does the company's quality assurance costs have an impact on full enterprise value?

2. What measures need to be taken to make quality costs an enterprise value driver?

The research has been conducted in two stages. During the first stage, the literature on enterprise value management and the problems of applying quality costs calculation in enterprises was reviewed. It turns out that, firstly, only few companies keep records of quality costs (Ayach et al., 2019, p. 97), besides, during the literature review, no information on the use of these costs for enterprise value estimation was encountered. During the second stage, it was proposed to present the relationship (links) between the quality costs identified in a catering enterprise and its operating costs, as reflected in the financial statements. The identification and classification of quality costs for the catering enterprise was developed using the basic PAF (prevention, appraisal, failure) quality cost model (Ocakci et al., 2021, p. 05008) (cf. Table 3).

Table 3. Proposed quality costs structure for a catering company

Type of quality costs	Activity creating quality costs
prevention costs (relate to the design, implementation and maintenance of the quality system, technical condition of equipment and tools)	Planning quality requirements for the catering service, e.g.: – setting up the quality system (e.g. determining the essence of the quality plan, establishing the parameters of the quality documentation) – determining the parameters of the products needed for the catering service – determining the parameters of the equipment necessary for the catering service – determining staff qualifications – determining equipment requirements – preparing a quality training programme Ensuring the required level of quality of the catering service, e.g.: – ensuring the quality system (e.g. developing a quality plan, preparing quality documentation) – selecting the supplier of products necessary for the catering service – selecting the equipment necessary for the catering service – selecting suitably qualified staff – selecting a catering equipment supplier – staff training in quality management Improving the quality level of the catering service: – surveys to identify customer satisfaction – benchmarking

Type of quality costs	Activity creating quality costs
	– preparing quality improvement programmes – other, e.g.: office work and consumables related to quality assurance, business travels, insurance, quality certification activities
evaluation costs (related to the evaluation of purchased materials, intermediary activities, determining the capacity of processes, services in terms of compliance with specifications)	Monitoring the quality system (e.g. evaluating the implementation of the quality plan, evaluating the quality documentation, internal quality assessment, quality assessment by external bodies), e.g.: – evaluating staff qualifications – evaluating the products necessary for the catering service – evaluating the equipment necessary for the catering service – evaluating suppliers – evaluating the organisation and course of basic and ancillary processes – customer satisfaction survey – other: office work and consumption of consumables related to quality assessment, day-to-day checks e.g. OHS
internal noncompliance costs (are the result of a failure to meet certain standards of the catering service and this had been noticed before the service was provided)	Costs associated with: – waste – corrections – re-inspection – reduced quality level – losses – error analysis
external noncompliance costs (are related to the failure to meet customer requirements and relevant specifications)	– service improvement costs – claims costs – complaint handling costs – liability (compensation) costs – loss of trust, reputation costs

Source: Authors' own study based on (Opolski et al., 2005 pp. 178–181).

This exercise was aimed at highlighting the relationship of quality assurance costs to business operations, which can translate into increased enterprise value. An analysis of the impact of quality costs on the various value drivers proposed by Rappaport was carried out. Based on this analysis, the conditions that must be met for quality costs to become an enterprise value driver have been determined.

A limitation of the research is that it is carried out on a theoretical level. Only practical verification will make it possible to determine the measurable impact of quality costs on the value of a specific enterprise.

Research findings

As a result of the standard quality costs calculation, it is possible to obtain basic information on the share of individual groups of these costs in the total quality costs or, by juxtaposition with other values taken from financial statements (e.g. production value, salaries of employees responsible for quality assurance, profit, sales revenue), on the impact of introducing/maintaining quality on other processes taking place in the enterprise (Ciechan-Kujawa, 2005, p. 117; Hamrol, 2008, p. 435; Konarzewska-Gubała, 2003, p. 464; Lisiecka, 2009, p. 98; Szczepańska, 2009, p. 278).

The calculated quality costs ratios make it possible to determine the relations occurring between the individual groups of quality costs, as well as the impact of these costs on the financial results of the organisation and the profit and loss account.

To identify the place of quality costs in operating costs, a dependency matrix can be used as a basis for identifying the relationship between the costs by type structure and quality costs (cf. Table 4).

Table 4. Proposed correlation matrix of quality costs and costs by type in a catering company

Costs by type*		400	401	402	403	404	405	409
Prevention costs								
1	Planning quality requirements for the catering service, e.g.:							
A	determining the parameters of the equipment necessary for the catering service		x	x		x	x	
B	*setting up the quality system (e.g. determining the essence of the quality plan, establishing the parameters of the quality documentation)*		x	x		x	x	x
C	determining the parameters of the products needed for the catering service		x	x		x	x	
D	determining staff qualifications			x		x	x	
E	determining equipment requirements		x	x		x	x	
F	preparing a quality training programme		x	x		x	x	
2	Ensuring the required level of quality of the catering service, e.g.:							
A	*ensuring the quality system (e.g. developing a quality plan, preparing quality documentation)*		x	x		x	x	x
B	selecting the supplier of products necessary for the catering service		x			x	x	
C	selecting and purchasing the equipment necessary for the catering service		x			x	x	
D	selecting suitably qualified staff					x	x	
E	selecting a catering equipment supplier					x	x	
F	*staff training in quality management*			x			x	x
3	Improving the quality level of the catering service:							
A	*surveys to identify customer satisfaction*		x	x		x	x	
B	*benchmarking*		x	x		x	x	
C	*preparing quality improvement programmes*		x	x		x	x	
D	*other, e.g.: office work and consumables related to quality assurance, business travels, insurance, quality certification activities*	x	x		x			x
E	maintenance, ongoing inspections, repair of catering equipment		x	x		x	x	
Evaluation costs								
1	Monitoring the quality system (e.g. evaluating the implementation of the quality plan, evaluating the quality documentation, internal quality assessment, quality assessment by external bodies), e.g.:							
A	evaluating staff qualifications		x			x	x	
B	evaluating the products necessary for the catering service	x	x			x	x	
C	evaluating the equipment necessary for the catering service	x	x			x	x	
D	evaluating suppliers		x			x	x	
E	evaluating the organisation and course of basic and ancillary processes	x	x			x	x	
F	*customer satisfaction survey*		x			x	x	

Costs by type*		400	401	402	403	404	405	409
G	other: office work and consumption of consumables related to quality assessment, day-to-day checks, e.g. OHS	x	x	x		x	x	
H	*external audits*			x				
Internal noncompliance costs								
1	Costs associated with:							
A	waste		x			x	x	
B	corrections	x	x			x	x	
C	re-inspection	x	x			x	x	
D	reduced quality level	x	x			x	x	
E	losses	x	x			x	x	
F	*error analysis*	x	x	x		x	x	
G	repairs of catering machinery and equipment		x	x		x	x	
External noncompliance costs								
1	Costs associated with:							
A	service improvement		x	x		x	x	x
B	claims		x	x		x	x	x
C	complaints' handling			x		x	x	x
D	liability (compensation)			x				x
E	loss of trust, reputation			x				x

*the numbering of costs by type is in accordance with Art. 10 of the Act of 29 September 1994 on accounting (Ustawa z dnia…), where:
400 – depreciation, 401 – consumption of materials and energy, 402 – external services, 403 – taxes and charges, 404 – wages, 405 – social security and other benefits, 409 – other costs by type
Explanation:
E.g.: *setting up a quality system* (...) costs that may not be recognised by the company as operational

Source: Authors' own study.

On the basis of the data presented in Table 4, it can be seen that the overwhelming number of identified quality costs items affect the number of wages, social security and other benefits. Such a state is dictated by the fact that for the quality assurance system (formalised or not) the company's personnel is responsible. In some cases, this process may be outsourced, in which case the costs associated with external services will increase. In practice, however, it is essential that employees monitor and regulate quality levels as part of their duties. It is they, as process owners, who are the best suited as internal "point" quality controllers. Also, quite many links fall into the items of quality costs and costs related to material and energy consumption. Catering services are characterised by a systematic process of consumption of materials (raw materials used to produce finished dishes and other products, e.g. beverages) and energy because of its use by refrigeration and heating equipment and small catering equipment. The high quality of the input raw material guarantees the corresponding quality of the finished product. The same is true for the use of all kinds of machinery and equipment, the technological sophistication of which has an impact on the quality of the final products.

In case of hiring an external company that can assist the enterprise in implementing a quality system, the value of the costs characterising external services will increase. It should be borne in mind that the process of implementing the quality system alone

may or may not be included in the company's operational activities. Decisions on how to account for these costs are internal company choices. Assuming that such activities affect the size of management costs and not operating ones, their value will not be part of the company's value generator in terms of quality. The share of quality costs in other costs by type is based on the assumption that to improve quality, the employees shall take appropriate actions (travels to the customer to verify noncompliance, providing compensation, etc.). It should be noted that the relationships presented in Table 5 are contractual, and their arrangement will depend on the enterprise's internally applied policy on the company chart of accounts and quality costs calculation.

Discussion

The analysis of the impact of factors affecting enterprise value was based on the classification proposed by Rappaport, which formed the basis for the search for relationships between quality assurance cost groups and parameters directly affecting enterprise value.

Undoubtedly, in the short term, an increase in a company's quality costs, in the absence of the possibility of compensating them by increasing the price for the goods and services offered, has the effect of reducing the company's operating profit. This has a direct impact on the reduction of the operating profit margin, and in such a case the enterprise value decreases. However, if, as a result of an increase in the level of quality, it will be possible to increase the price of the products or services offered by the enterprise, the decrease in its value will not occur. An important determinant affecting the possibility of assessing the impact of quality costs on enterprise value is their accurate identification within the company's financial reporting. Only the possibility of full identification of quality costs will make it possible to determine the impact of this parameter on the operating profit margins generated in the company and, consequently, on its value. Improperly organised financial reporting of quality costs may make it difficult to determine the necessary increase in the level of prices of the goods and services offered, which will at least ensure the maintenance of the current level of the company value. Undoubtedly, the condition that should be fulfilled for the evaluation and analysis of quality costs is the achievement of results in the level of competitiveness of the offered goods or services. The implementation of quality costs calculations should have a significant impact on the customer's perception of the competitiveness of the product. Companies that are aware of the appropriate level of quality offered will see the justification of the costs incurred to maintain this level. Unfortunately, the degree of customer satisfaction is not a parameter that appears immediately after changes have been implemented. However, we can find industries that should react quickly to this problem. Such an example is gastronomy, where customer feedback and the entrepreneur's reaction to it can occur in a truly short time (e.g. free refreshments, price discounts). Such behaviour by the entrepreneur can reduce the negative evaluation

of the service, and a customer satisfied with the compensation may quickly revisit the establishment, thus contributing to the business' revenue.

The situation is quite different in industries where building trust and customer satisfaction is a long-term process, e.g. in industries where the manufacture of a product takes a long time (construction industry). In this case, the effect may take longer to diagnose, and the effects of the measures adopted will be visible in the financial parameters much later. Undoubtedly, the consequence of the changes introduced thanks to the identified quality costs incurred in the enterprise should be the increase in the competitive advantage of the entity. The consequence of such improvement of the competitive advantage of the enterprise should be, in the long term, an increase in operating profit margin on offered goods and an increase in the sales volume of the company. Thus, both factors affect the amount of cash flow generated by the company in the future – but the increase in cash flow will occur, as already noted, with a lag when compared to the time of introduction, assessment and analysis of the quality costs of the goods and services offered. It should be noted here that the results generated on cash flows affect the enterprise value after they have been adjusted by the discount factor, which is the cost of capital used in the entity for operating activities. Thus, the higher the cost of capital used for the company's operating activities, the effect in the form of an increase in the value of cash flows should occur earlier, and thus the increase in the enterprise value. This example shows the strong link between the various factors affecting enterprise value proposed by Rappaport – activities that increase value of one company may not necessarily have a similar effect on another. In the case of catering companies, where, as mentioned, the effects resulting from quality costs calculations and manifesting themselves in increased margins and sales revenue volume (i.e. increased cash flow) may occur faster, the cost of capital employed for operations (the weighted average cost of capital of the company) may be higher than in the case of companies with a longer time required to increase cash flow. However, the cost of capital for companies in the same industry also varies. Therefore, the analysis of the impact of the changes should be done on an entity-by-entity basis.

Quality costs also have an indirect impact on the non-financial statement factor, which is the period of competitive advantage, defined in the literature as the period of time during which a company can achieve extraordinary advantages over other competitors (Mills, 2005, p. 68). All the factors influencing enterprise value are highly interrelated, but each time, the prerequisite for determining their impact on the company's value is that they can be properly identified and correctly measured.

Conclusions

Quality costs show the expenses that a company incurs due to quality assurance activities. They can be measured quantifiably once appropriate procedures have been put in place (Martyniuk et al., 2021, pp. 186–187), but to do so, it is necessary to

properly prepare a cost identification system. Although they reduce enterprise value in the short term, in the long term their incurrence can lead to an increase in company revenue. It should be noted that the concept of value management focuses on the long term – the result of implementing value management is long term in nature. In this context, quality costs can be considered as a tool that fits into the framework of enterprise value management. As mentioned, quality costs fall into two main groups. The least favourable situation is the one that will cause an increase in the cost of noncompliance, in particular noncompliance related to a reduction in the quality of the products or services in the opinion of the customer. The costs incurred within this group may in fact result in a decrease in enterprise value, as unfavourable situations may contribute to a lesser customer interest in the goods offered by the company. Every company tries to react to such situations as soon as possible. It analyses the factors that caused the noncompliance, takes remedial action, and assesses the degree of improvement. In addition, on an ongoing basis, companies inspect and evaluate the level of their products and services, especially in relation to their competitors. Such activities generate costs of compliance in the quality costs calculation, which do not indicate poor quality but, on the contrary, reinforce the appropriate quality level assumed by the company. By maintaining it and, where necessary, increasing it, enterprise value increases.

It is important to note that quality costs can affect various factors impacting enterprise value. They affect operating profit margins – in the short term by reducing this margin, but in the long term they can increase it and consequently raise the company's cash flow and enterprise value. Quality costs can also affect sales revenue dynamics. In the short term, there is undoubtedly no increase in the dynamics, but in the long term they can increase the sales revenue dynamics of the enterprise, which consequently means an increase in company value. However, also in this case we are dealing with the long-term impact of quality costs – usually changes in stock levels do not happen immediately, but it is a process that takes time. Incurring appropriate quality costs affects the image of the company among its customers and can build a competitive advantage. Therefore, it can be concluded that quality costs are a tool that influences most of the factors that, according to Rappaport, affect enterprise value – a factor that quality costs do not influence is the cost of capital and the effective tax rate (on income). However, given that quality costs are related to sustainable development, the construction of a tax law promoting activities related to such development would result in an impact of this tool on both factors indicated – but this depends on the state's tax policy and not on the actions of a specific company.

In the opinion of the authors, quality costs therefore are the universal tool that can be used in practice to influence the various factors building enterprise value. There are strong interactions between various factors, the direction and type of which depend on individual entities. To determine their precise impact, an analysis of the specific entity and the environment in which it operates should be carried out. This should be supported by analyses of the long-term impact of the planned quality costs on the situation of the company under review.

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