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TQM TOOLS IN CRISIS MANAGEMENT

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Abstract

The current article is concerned with basic aspects connected with improvement of crisis management activities employed by economic operators. The work presents the crisis management model with its fundamental phases and identifies TQM tools that might be applied in all of these phases. The analysis included in the work has been supported with research conducted on companies located in northern Poland.

Keywords: crisis management, TQM, quality tools.

1. Introduction

During their operation, not only do companies have to react to environmental circumstances but also must consider the necessity to meet increasingly high expectations of customers on the one hand, and minimize costs on the other. Therefore, they keep searching for mechanisms that would help them to operate on the market efficiently. However, due to their imperfections, these mechanisms do not allow companies to fully achieve all of their goals – hence the need for improvements in certain areas of companies' operations. One way of doing so might be Total Quality Management. It can be applied both during normal operation of a company and in critical situations, which affect companies more and more frequently. These situations might impact the whole organization or its individual areas. In order to deal with problems effectively, economic operators should employ crisis management approaches comprising anticipation, prevention and reaction activities. Moreover, it becomes important that an appropriate set of tools is chosen for a particular situation that a company finds itself in.

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The aim of this article is to identify TQM tools applicable at various phases of crisis management by presenting the results of the research on the use of TQM tools.

Crisis management and companies' quality improvement

The source literature provides a number of works on crisis, perceiving it as a situation or state (Czarnecki, Starosta, 2014). R.M. Barton defines it as an unforeseen event that often has negative consequences such as lower production, redundancies, loss of revenue and tarnished image (Barton, 1993, p. 12). Several phases of crisis management have been identified:

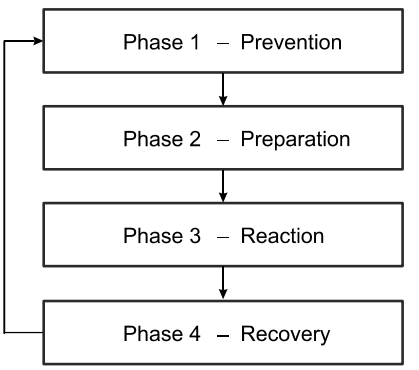

Figure 1. Crisis management phases
Source: own work based on Krzakiewicz, 2008, p. 33.

Figure 1 shows a division of crisis management into four phases and is related to a set of actions taken before, during and after a crisis. It should be pointed out that Phase 4 – Recovery, which finishes the cycle, leads to Phase 1, the purpose of which is to prevent another crisis.

At various phases of crisis management, the organization has to face a number of problems. In Phase 1 they stem from insufficient data and are related to identifying reasons and symptoms of a critical situation. They are also connected with determining the onset of the crisis and its further development. Phase 2 – **Preparation** generates questions connected with organization of the management system, as well as with methods of managing an organization during a crisis. Phase 3 – **Reaction to a crisis** is the stage when a company has to outline the strategy and operational activities, the purpose of which is to deal with the crisis and socio-psychological aspects of the company's operation. Finally, Phase 4 – **Recovery of an organization after a crisis** comprises issues related to analyzing and assessing the crisis, as well as to the elimination of its effects (Krzakiewicz, 2008).

Despite continuous development, companies are not able to avoid critical circumstances completely. However, such improvement activities might mitigate intensity of crises and lower their frequency. Therefore, it is very important to search for concepts, methods and tools that would allow economic operators to improve

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their operation in various areas. In the literature of the subject connected with the crisis management there are description of using several method and techniques from different areas of management, which are f.eg.: decision making (f.eg. Anderson 1983, pp. 201–222) or communication (f.eg. Seeger and Ulmer 2001, pp. 369–376). There are also other areas of management which could be helpful for crisis management. One of such concepts is Total Quality Management, defined in the source literature as "continuously developing management system consisting of values, tools and techniques aimed at increasing internal and external customers' satisfaction, combined with lower resource consumption." (Szołtysek, 2005, pp. 55–56). Total Quality Management is connected with a set of tools which have been discussed in a number of works on the topic (Zieliński, 2014; Dahlgaard, Kristensen, Kanji, 2002; Karaszewski, 2005; Thompson, Koronacki, Nieckuła, 2005). It seems crucial to ask the following research questions:

— Do companies use the tools of Total Quality Management in crisis management?
— What Total Quality Management tools might be used at various phases of crisis management?

TQM tools for quality improvement at various stages of crisis management

This article contains research on application of TQM tools in crisis management, with its methodology presented in Fig. 2. TQM tools are widely described in the literature of the subject. The most common groups are: seven basic quality tools and seven new quality tools, completed by other common tools like f.eg. QFD, FMEA or benchmarking (f.eg. Dale 2007, pp. 336–381).

Firstly, the research focused on analyzing companies' awareness of TQM tools in crisis management. It turned out that the majority of companies did not apply Total Quality Management tools in crisis management (57%), which could have resulted from the lack of knowledge on possible usage of this kind of tools and the advantages they might bring to companies. It could also be connected with incorrect identification and understanding of individual phases of crisis management and actions to be taken at each of them.

Then, the research focused on identification of Total Quality Management tools used by the companies in crisis management approach. The results have been included in Table 1.

The results refer only to those companies that manage crisis with using of Total Quality Management tools. It should be mentioned that they focus mostly on identification of errors and flaws, as well as reasons of their occurrence.

Thus, it seems important to make an attempt to construct a set of Total Quality Management tools that could be applied at various phases of crisis management.

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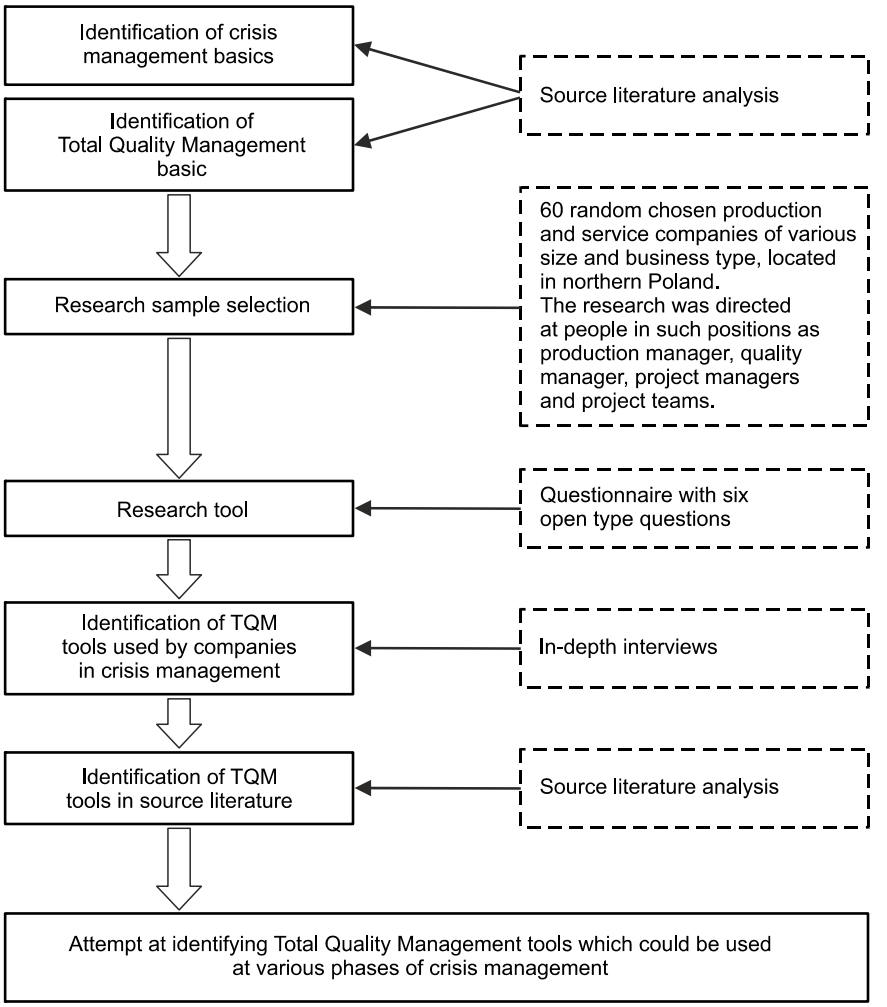

Figure 2. Research methodology
Source: own work.

Table 1. TQM tools used by companies in crisis management

Techniques of generating ideas	20,0%
Flaws identification tools	55,0%
Cause and effect diagrams	55,0%
Control charts	68,3%
Don't know	6,7%

Source: own work.

Figure 3 presents techniques suggested for Phase 1, that is, crisis prevention.

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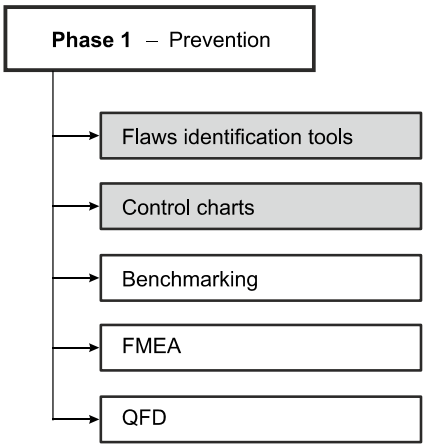

Figure 3. TQM tools applicable in Phase 1 – crisis prevention
Source: own work.

In Phase 2 – preparation for a crisis, the following tools could be used:

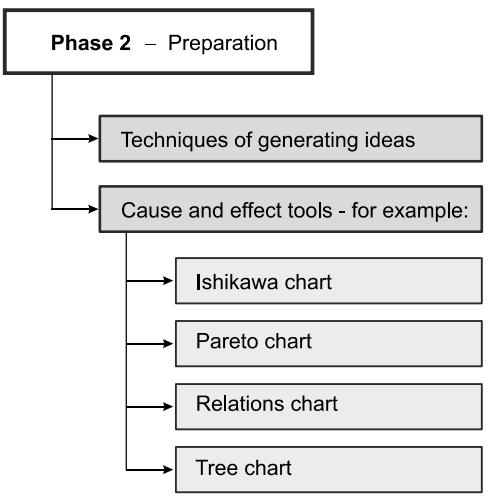

Figure 4. TQM tools that could be used in Phase 2 – preparation for a crisis
Source: own work.

In the next phase, that is reaction to a crisis, companies might use the tools presented in Fig. 5.

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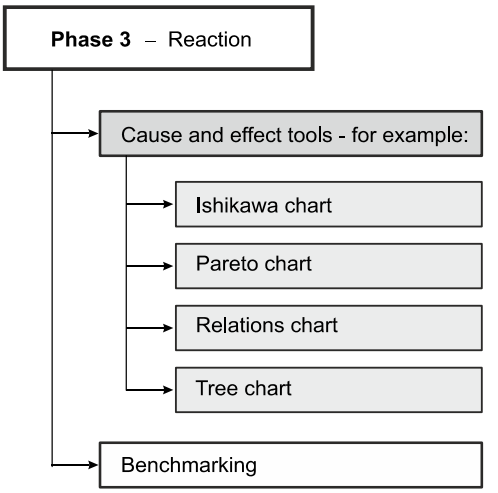

Figure 5. TQM tools that could be used in Phase 3 – reaction to a crisis
Source: own work.

Figure 6 shows the tools that could be used in the fourth and final phase – recovery, when company's reaction to the crisis is assessed.

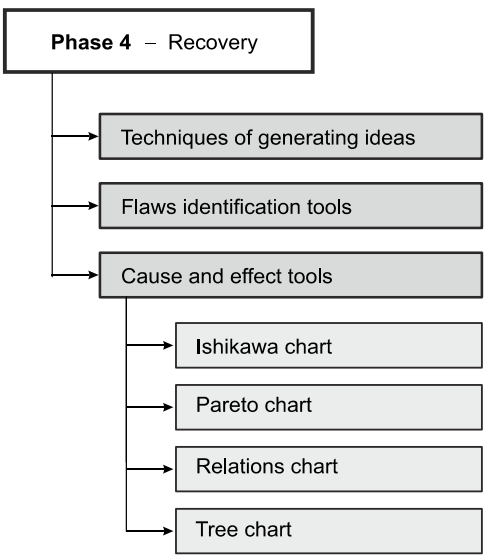

Figure 6. Total Quality Management tools applicable in Phase 4 – Recovery
Source: own work.

The above division distinguishes tools actually used by the companies (in grey) and the ones that could additionally be used to enrich individual phases of crisis management (in white). The range of selected tools could be later expanded with techniques relevant for a specific market branch or type of economic operator.

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2. Conclusion

The current article has presented a holistic approach to application of Total Quality Management tools by organizations. The above discussion refers to production as well as service companies of any business type. Therefore, the division described in the article could be expanded later by tools applicable to specific business types on the one hand, and the kinds of crises affecting companies on the other.

References

1. Anderson P.A.: *Decision making by objection and the Cuban missile crisis*, Administrative Science Quarterly, Vol. 28, Issue 2, 1983.
2. Barton R.M.: *The Crisis Management*, Oxford Press Publishers, Oxford 1993.
3. Czarnecki M., Starosta A.: *Two faces of anti-crisis management from definitions to concepts*, Management, Vol. 18, No. 1, 2014.
4. Dahlgaard J., Kristensen K., Kanji G.: *Podstawy zarządzania jakością*, Wyd. PWN Warszawa 2002.
5. Dale B.G.: *Tools and Techniques*: *An Overview* [in:] Dale B.G., van der Wiele T., van Iwaarden J., Managing Quality, Blackwell Publishing, Oxford 2007.
6. Karaszewski R.: *Zarządzanie Jakością. Koncepcje, metody i narzędzia stosowane przez liderów światowego biznesu*, Wyd. Dom Organizatora, Toruń 2005.
7. Krzakiewicz K.: *Zarządzanie antykryzysowe w organizacji*, Wyd. Akademii Ekonomicznej w Poznaniu, Poznań 2008.
8. Seeger M.W., Ulmer R.R.: *Virtuous responses to organizational crisis*: *Aaron Feuerstein and Milt Cole*, Journal of Business Ethics, Vol. 31, Issue 4, 2001.
9. Szołtysek K.: *Koncepcja Total Quality Management* [in:] Ładoński W., Szołtysek K., Zarządzanie jakością, Cz. 1. *Systemy jakości w organizacji*, Wyd. Akademii Ekonomicznej, Wrocław, 2005.
10. Thompson J., Koronacki J., Nieckuła J.: *Techniki zarządzania jakością od Shewharta do metody Six Sigma*, Akademicka Oficyna Wydawnicza Exit, Warszawa 2005.
11. Zieliński G.: *Problemy w klasycznej siódemce instrumentarium jakości. Narzędzia przyczynowo-skutkowe do identyfikacji i analizy ich przyczyn*, Utrzymanie Ruchu 2/2014.

NARZĘDZIA TQM W ZARZĄDZANIU KRYZYSOWYM

Niniejszy artykuł poświęcony jest podstawowym aspektom związanym z doskonaleniem podmiotów w obszarze zarządzania kryzysowego. Opracowanie prezentuje model zarządzania kryzysowego z jego fundamentalnymi fazami oraz identyfikuje narzędzia TQM, które mogą być wykorzystane we wszystkich tych fazach. Analizy zawarte w opracowaniu zostały poparte badaniami przeprowadzonymi na przedsiębiorstwach zlokalizowanych w północnej Polsce.

Słowa kluczowe: zarządzanie kryzysowe, TQM, narzędzia jakości.

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