

Investigating the benefits and challenges of Total Quality Management implementation in the pharmaceutical companies

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Abstract

Pharmaceutical companies in Eastern European region are facing urgent quality tools implementation due to fierce global competition. The aim of this research is to provide current understanding of TQM in this region and provide further guidance on how to improve quality standards and techniques. The study follows a qualitative method and data was collected through 5 semi-structured interviews. The study highlights that TQM in pharmaceutical industry in this region is not well developed. The findings shows that there is lack of senior management commitment to TQM principles explanation and emphasises on its importance. Additionally, lack of governmental influence on quality standards and budgeting problems also affects TQM development. Moreover, there is a believe that TQM will not influence the overall performance of the company in the positive manner, since the development of such quality improvement method has to be efficiently budgeted and under current economic and political circumstances it is not possible.

Introduction

In order to satisfy customers' needs, wants and requirements, three fundamental criteria have to be achieved, which are quality, price and delivery (also known as 'On-quality', 'On-cost' and 'On-time'). While delivery and price bear a short-term effect (Hoyle, 2007), quality lasts the customer for the longest period (Oakland, 2014). Therefore, nowadays quality is considered as the most important element of company's reputation. Research has shown that once being faced dissatisfaction with quality, it takes long time for organisations to regain the trust of customers and often can lead to loss of customers (Oakland, 2014; Chen, 2017). In research by Steenkamp (1990) quality is explained from two perspectives: macro level (the importance of quality for the

country) and micro level (how quality evolves for managers). Therefore, it is important to outline that this research will be conducted on a micro level, since we are interested in changes of quality perceptions at company's level.

There are numerous definitions of quality due to deep interest of researchers in this area. Nonetheless, study conducted by Garvin (1984) in early 1980s states that the quality issue was not fully covered by scholars at that time, as researchers from different backgrounds (e.g. marketing, philosophy, economics etc.) considered quality from different perspectives. However, nowadays many frameworks exist that define, explore and assure quality from various angles (Heravizadeh, et al., 2008; Núñez et al., 2015). Porter (1980) positions quality as a product differentiation strategy, which lures customers and creates barriers for further competition. Adding to this, Ye & Mukhopadhyaya (2013) in their study suggests quality as a strategic goal that exists in company in order to increase the demand of products. Despite one emphasises that joint quality improvement leads to cost and time reduction, Chen, et al. (2012) oppose saying that quality excludes these factors and a new strategy of organisation – quality-time-cost-oriented strategy – has to be followed in order to attract consumers (Ouyang et al., 2002). At the same time, Juran & Godfrey (1999) add that quality affects not only the cost, but also the income of the company and connects this effect with customer's satisfaction. Therefore, it is important to consider quality from customer's point, as they have a significant influence on it.

The perception of quality is not the same for an organisation and customers. According to research conducted by Montgomery Ward & Co. (1973), customers evaluate a product by 'usefulness' and its relation to investments made, where the first element of quality evaluation is compliance with quality standards and the last – actions made by the company to eliminate the defects. In contrast, research conducted in the beginning of 21st century states that nowadays the first element of customer satisfaction in terms of quality is accessibility (e.g. convenient parking slots and user friendly websites), while the last element is ability for continuous improvement, even if the product cannot be further improved (Brown, 2007; Mitra, 2016). Consequently, there is a change in quality understanding from customer's point of view: not only the product itself has to be of a good quality, but also the way of receiving information about it, availability of the sales person, way of negotiation etc. To create such 'Circle of satisfaction', organisation has to be well organised, solid and efficient and provide satisfaction to both, customers and employees (Vora, 2002). Therefore, quality from the organisational point of view also has to be considered. By involving the whole organisation (e.g. marketing, procurement, financial etc. departments) in process of identifying and satisfying customer's needs, the performance of the company also will be improved, since there is a belief that improvement in quality lead to advancements in efficiency, performance and level of income (Terziovski, et al., 1999; Mitra, 2016). Out of this, interconnection between such organisational variables as organisational structure, performance and strategy becomes significant for further company's activities and highly influences the quality (Prajogoa & Sohalb, 2006). At the same time, the organisation also becomes an internal consumer of quality: in order to receive better results, the organisation itself has to produce high quality accomplishments and split it respectively between the departments, (e.g. report created in marketing department has to satisfy supply chain department etc.) in order to carry the activities of the company continuously (Hoyle, 2007). Consequently, it is becoming important to achieve high quality standards in the company itself. These achievements might happen as a result of TQM implementation in the company, which will support the overall company's strategy, improve organisational performance, and increase the level of consumer satisfaction (Prajogoa &

Sohalb, 2006). Psomas and Jaca (2016) measured the impact of total quality management on service company performance and showed that TQM factors concerning customers, employees and top management significantly affect the performance.

Quality management has become one of the most significant factors of company's success and competitiveness (Juran & Godfrey, 1999). Today, quality management can be defined as a system, which directs and controls the organisation to quality (Visser et al., 2010). In order to implement this managerial practice effectively, TQM principles have to be followed. The following scholars examined the variety of such principles as Garza-Reyes et al. (2018), Oakland (2014), Bhat (2010), Zaire (1991), Ghobadian & Gallea (1997), Hill & Wilkinson (1995), Keng Boon et al. (2005). Oakland (2014) states that effective TQM implementation can be achieved through the 4 Ps model. This includes planning, performance, process and people (Oakland, 2014). Other from this framework, Bhat (2010) introduces a broader view on the implementation of TQM practice through the main TQM infrastructures: leadership, strategic planning, human resource management, process management and data and information management, as this function is supportive to any business. The first infrastructure is leadership: each manager as a leader has to act as leader for the quality in the organisation and establish quality value and goals (Bhat, 2010). Zairi (1994) emphasises the difference of managers and leaders in terms of first infrastructure. As per his studies, soft and inter-personal skills differentiate leaders from managers (Zairi, 1994). The second infrastructure of TQM is strategic planning, as the company has to set a long time strategy and quality has to be among the main objectives. Even though, strategic planning is believed to be among TQM infrastructures, many researchers, such as Srinidhi (1997), Bilich and Neto (1997) etc. believe, that today strategic planning in terms of TQM has evolved to a separate science, which is known as strategic quality management (SQM). According to Madu and Kuei (1993), the strategic quality management philosophy aims to provide company with sustainable competitive advantage by strengthening its quality objectives. The third infrastructure includes human resource management, which means that all workers have to be involved in TQM process so that to follow the process of continuous improvement inside of the company. From Flynn et al. (1994) work, which is restricted only to plants, the third infrastructure is described differently and called workforce management (Flynn, et al., 1994). The above-mentioned study states that in order to improve TQM, the employers have to be loyal to the company and recruit employees with task-oriented skills, ability to work in team and follow quality values (Flynn, et al., 1994). The fourth infrastructure is process management, as this process leads to delivering goods to the customers, which have to be of a high quality (Bhat, 2010). In contrast, the study of Flynn, et al. (1994) describes process management as a particularly manufacturing process, which includes equipment maintenance, operational activities and documenting of manufacturing process (Flynn, et al., 1994). The fifth infrastructure is data and information management, as this function is supportive to any business (Bhat, 2010). In Luburić's (2014) point of view, information is not that important as a separate infrastructure. Efficient decision-making process, based on logical, accurate and checked information is more important for TQM (Luburić, 2014). As to Zairi (1994), a different framework of implementing TQM is possible: TQM can be implemented through 3 aspects: continuous improvement, value added management and employee involvement. Other scholars suggest using such tools as statistical control, Six Sigma, Kaizen approach, Deming wheel Paretto analysis, tree decisions histograms etc. (Imeri and Kekäle, 2013). However, implementation of TQM principles cannot be efficient, if it is not a continuous and integrated

process in the company, which is constantly reviewed and changed (Kia LiangTan, 1997; Ross, 2017).

At the same time, such scholars as Oakland (2014), Rahman & Bullock (2005) argue that not only 'hard management tools', described previously, influence effective TQM implementation. For instance, Rahman & Bullock (2005) emphasise that the implementation of 'hard tools' may not lead to a strong competitive advantage, if 'soft tools' are not implemented. At the same time, soft skills have a strong indirect effect on company's activities through its influence on 'hard tools' (Rahman & Bullock, 2005). As to Oakland (2014) 'soft tools' are established through a 3 Cs model: customers, communication and commitment. However, Fotopoulos and Psomas (2009) provides another understanding of 'soft tools' of TQM, which are leadership, employee motivation and organisational culture. Vouzas and Psychogios (2007) generalises the possible 'soft' principles and identifies 9 tools, which add to the previously discussed scholars absolute employee involvement, endless improvement, continuous training and mentoring programmes, top-management backing and sustainable management style.

Approaches of 'hard' and 'soft' principles while TQM implementation

In order to implement TQM effectively, a guidance of 'usage of hard' and 'soft' TQM principles has to be established. Mosadeghrad (2013) states that three possible approaches of implementation of 'hard' and 'soft' skills exist: The first approach is called standard-based approach and is based on implementation of new standards in the company (e.g. ISO 9001). This approach provides managers with standardisation and administrative methods of control of employee's activities. However, this method does not consider customer as a part of quality improvement plan, therefore is not believed to be effective, as it concentrates only on the organisational needs of the company (Mosadeghrad, 2013). Out of this, the conclusion is that ISO implementation in terms of quality improvement will not lead to a competitive advantage and has to be supported by other tools. The second possible approach is based on quality awards models. TQM acts as a self-assessment tool for companies and is being constantly recognised by different organisations that present the awards. This method motivates companies not only to concentrate on administrative functions and their quality, but goes beyond that. The third approach includes individually developed methods of TQM implementation, which can be applied in any industry. All of these three approaches can work as guidance of TQM implementation (Mosadeghrad, 2013).

Besides the implementation of 'hard' and 'soft' principles, using different approaches, some circumstances might influence TQM implementation. For example, in order to hit higher results from TQM implementation, company has to use its capacities in full (e.g. full capacity of employees and training programmes from them; elimination of large slacks in manufacturing process in order to increase productivity by slight increase in quality indicators) (Oliveira et al. 2017). In order to identify these slacks, employees and customers are the ones who can provide a feedback. Therefore, it is significantly important to have a tooled feedback system (Tan, 1997).

Beyond TQM implementation: the analysis of TQM effectiveness

Even though the implementation of TQM is a long-time process and most probably increases the competitiveness of the company overall (Youssef and Youssef, 2018; Ho, 2010), as well as positively influences business performance, it is significantly important to analyse the results of the implication of such managerial tool. The latter can be analysed by using such tools as Accruals and Altman Z-score (Lawson, 2008). In addition, more abstract tool, such as measurement of client's satisfaction also can be used for quality improvement evaluation (Al-Abri and Al-Balushi, 2014). These methods are favourable for evaluation of TQM implementation, as they do not focus on finding errors and defects, but on continuous work analysis for regular advancement (Elliot, 1993). Nonetheless, the above-mentioned tools are aimed to analyse the impact of so-called 'hard' TQM tools, while scholars believe that the middle managers in companies of any scale lack the system for measurement of 'soft' tools (Psoma et al. 2017). This lack of TQM knowledge may occur, since quite often middle managers confront to TQM implementation as they are not involved into this process (Dale & Cooper, 1994). To avoid this, Dale & Cooper (1994) suggest to improve communications in the company and provide prove of TQM importance to middle managers from senior executives. Tan (1997) emphasises the importance of a teamwork concept in order to manage TQM implementation effectively, since in case employees are fully involved in quality process, it is likely to receive grounded feedbacks from them. Besides, a better understanding of connection between quality improvement and company's performance is required in order to design long-time strategies with quality control and assurance (Mann & Kehoe, 1994).

Importance of TQM in pharmaceutical industry

From the beginning of 21st century, quality in pharmaceutical industry became a popular field of studies. This is connected with introduction of Good Manufacturing Practice (GMP) by Food and Drug Administration (FDA) in early 2000, publishing of quality guidelines for pharmaceutical industry by World Health Organisation (WHO), and announcement of a set of quality requirements called 'The rules governing medicinal products in the European Union' (World Health Organisation, 2004; European Union, 2008). Consequently, pharmaceutical companies started to review their quality approaches and the interest of implementation of different quality techniques has risen (Woodcock, 2004). Among the techniques which are widely used in pharmaceutical industry such scholars as Shanley (2005), Haleem et al. (2015) highlight Six Sigma approach (e.g. The DMAIC model in AstraZeneca), Process Analytical Technologies (e.g. PAT in GlaxoSmithKline, Sanofi-Aventis), and ISO series (Shanley, 2005; Haleem, et al., 2015). TQM stands also among the methods of quality improvement in pharmaceutical company, but appears as an abstract term: a concept or a philosophy, rather than a technique (Haleem, et al., 2015; Mosadeghrad, 2013). The implementation of any above-mentioned techniques of quality improvement will improve total quality in the pharmaceutical company, as well as improve the company's image and reputation. However, many healthcare companies find it difficult to implement these tools, TQM in particular. Study conducted by Mosadeghrad (2013) emphasises the importance of implementation not only 'hard' TQM principles, but also 'soft' principles, since the superficial TQM implementation does not lead to quality improvement and might even lower it, causing negative impression for employees.

Current situation of pharmaceutical industry in Eastern Europe

In order to provide recommendations and possible best practice of TQM implementation in Eastern Europe, it is necessary to give a brief overview of current market situation in this region. This will help not only to understand Eastern European market better, but also find an example of how TQM might be implemented under similar economic and political circumstances.

As in PWC report (2013), emerging markets nowadays are believed to be significant influents on pharmaceutical arena. As an example, it is predicted that in 2016 30% of global pharmaceutical sales will be generated by emerging markets (PWC, 2013). However, we need to distinguish different types of them – there is BRICMT group (which includes Brazil, Russia, India, China, Mexico and Turkey) and another group which includes more mature economics – Eastern Europe and CIS (Common Wealth of independent States), in which this research is interested (PWC, 2013). This second group is believed to be lagging from BRICMT countries; furthermore, Eastern and Central European pharmaceutical companies are not predicted to grow significantly in recent future (PWC, 2013). Consequently, we can notice that despite some markets are believed to be emerging, all of them are growing with a different rate and significance on global pharmaceutical market.

Pharmaceutical market in Eastern Europe is considerably lagging from its western counterparts. The underlying reasons for that is a lack of managerial development and weak governmental influence on this particular sector. Besides, high level of corruption and lack of cost control lead pharmaceutical sector in this region to a lagging position. Moreover, countries in this region have undergone a sequence of political and economic reforms and currently experience instability (Seiter, 2010). These are the common reasons which expand on Eastern Europe overall, however, we have to consider each country in this region separately in order to create a better understanding of current state of pharmaceutical market. Besides, this can provide better understanding of TQM development in this region and accept or doubt the results of this research.

Despite negative tendency of pharmaceutical industry in this region (PWC report, 2013), pharmaceutical market in Eastern Europe was predicted to reach US 104.2 billion by 2016. In particular, such countries as Poland, Romania and Czech Republic are believed to be the most experienced in pharmaceutical industry and therefore attract subsidiaries of large transnational corporations (e.g. Zentiva, Gedeon Richter, Polpharma etc.) (CHEManager International, 2013; PWC, 2013). We can notice that this information is in full compliance with 3 groups of countries which were determined in literature review part; however, Romania was assigned to the second group of the countries, which means that this country is in transformation period. To analyse Polish pharmaceutical development, we can state that it will be significantly influential in European pharmaceutical market in recent years, since Poland is the only country in the EU, which experienced growth in pre-crisis and post-crisis periods (McKinsey & Company, 2015). However, low rates of productivity in comparison with western countries are making Poland less competitive in pharmaceutical sector. In long term, it is believed that healthcare sector will become a prominent one for Poland, since currently the growth in this sector was 7-8% in period 2004-2011, whilst the growth of this sector in developed Germany was only 5% (McKinsey & Company, 2015). If to consider the Romanian pharmaceutical market, it is expected to expand significantly by 2016, even though the growth will not be dramatic due to slow economic recovery (PR NewsWire, 2012). Romanian pharmaceutical industry is then followed by Slovakia. However, poor quality infrastructure and public administration are not influencing

pharmaceutical industry positively and dragging it down (European Commission, 2015). If to consider Hungarian situation in pharmaceutical sector, one can notice that there is a positive development of it. Even though Hungarian pharmaceutical industry has a long history of development, currently there is a modernisation of its infrastructure and huge investments in R&D (Jablonski, 2007). Speaking about Slovenian pharmaceutical industry, we should state that this market is described as a stable one, since Slovenia has a long tradition of pharmaceutical manufacturing (Invest Slovenia, 2012). Local agents explain stable situation on the market by highly knowledgeable employees, who are involved in this sector. Moreover, the infrastructure of pharmaceutical sector also stimulates the development of this industry – excellent physical and soft infrastructure lure foreign investors to Slovenia (Invest Slovenia, 2012). In a whole, this region has a great number of pharmaceutical companies.

The situation of pharmaceutical sector in the second group of countries (which includes Bulgaria, Latvia, Lithuania and Estonia, since Romania was determined as in transition period in terms of pharmaceutical industry development) can be described as a stable. In Bulgaria, pharmaceutical sector is believed to be one of the fastest growing sectors for the economy of the country. The production is believed to be of a high quality, whilst the prices are competitive. Moreover, Bulgarian pharmaceutical sector was not influenced negatively by economic crisis, which in further period led to faster growth. The major importers of Bulgarian pharmaceutical production are Russia, Romania, Croatia, Ukraine, Germany and Serbia. High level of export production, which is of a proper quality, provided Bulgarian pharmaceutical sector with additional investments for further reconstruction of already existing manufactures (Ministry of foreign affairs of Denmark, 2014). Therefore, we can make an assumption that in future Bulgaria might leave second group in a long time perspective. This is explained by the fact that pharmaceutical industry in this region seems to be favourable for investors worldwide. Latvia, Lithuania and Estonia (Baltic region in Eastern Europe) in terms of overall description can be grouped and described together, since the development of their pharmaceutical sector is similar. This region is renowned for highly developed biotechnological production, stable political and economic situation and high expenditure on R&D. Therefore, future development of Baltic States hugely depends on the level of budgeting and investment of pharmaceutical industry (Biotechnology in the Baltic States).

Moving to the third group, one should state that this group differs from the previous ones significantly, since these countries are not in European Union, consequently, they have other governmental regulations for this sector. For instance, in Moldova, pharmaceutical regulations are often neglected. The main challenge for pharmaceutical sector in this region is lack of time to introduce necessary regulation functions and unwillingness of human resources to change (Ferrario, et al., 2014). Besides, even though there are 25 pharmaceutical manufacturing companies functioning in Moldova, only two of them are GMP certified, which consequently means that Moldova pharmaceutical companies are not competitive enough and cannot export production to many countries, which obligatory require GMP certification (Ministry of Health in collaboration with the World Health Organisation, 2011). Belorussian pharmaceutical market can be described as a stable one however; the capacity of the market is rather low, since it stands just on the 5 position among CIS countries. Despite of this, the growth of pharmaceutical sector in Belorussia in the end of 2013 resulted in 41%, which is the highest growth rate among CIS countries (Gorlova, 2014). This market is described by high presence of imported pharmaceuticals (e.g. in 2012, 69.4% of drugs were imported, whilst only 30.6% were produced

by local representatives) (Belarus Pharmaceutical & Healthcare Industries Overview, 2017). Therefore, domestic output is currently highly motivated and supported by government (e.g. Joint ventures). However, international researchers state that in short run situation on pharmaceutical market in Belorussia will be rather pessimistic, which is supported by high inflation, increased economic and political instability, since Belarusian state is aligned from European Union regulations. On the other hand, Belarusian websites dedicated to pharmaceutical industry prove that currently there are 35 investment projects in pharmaceutical industry which are being put into operation (National Agency of Investment and Privatization, Republic of Belarus, 2015). Consequently, we can sum up that there is no clear understanding of pharmaceutical industry in Belorussia, since international resources state that the situation on the market is rather negative, whilst Belarusian agencies prove positive growth of pharmaceutical industry. Moving to Ukraine, which remains the second largest market in CIS (after Russia), we should state that under current unstable political situation, anti-terrorist operation in Eastern Ukraine, Crimea annexation and currency exchange instability, Ukrainian pharmaceutical industry suffers a lot and shows negative trends (Upharma: consulting healthcare, 2015). For instance, in January 2015 there was a positive tendency in the market in local currency, however, there was a negative dynamics in foreign currency (Ukrainian pharmaceutical market Sector study, 2016). Due to changes in GMP certification in the beginning of 2015, many pharmaceutical companies lost their positions. Besides, these changes are being implemented throughout 2015, due to harmonisation of Ukrainian laws with European Union regulations in pharmaceutical industry (the latest change was on 30 July 2015) (Association of international pharmaceutical manufactures, 2015). Besides, Ukrainian pharmaceutical market does not receive enough governmental expenditures and therefore outperform (only 4% are supported by the government, whilst in developed countries this indices has to be on a level of 76-80%, as in Germany, UK and France) (American Chamber of Commerce in Ukraine, 2015). Besides, the level of export of Ukrainian pharmaceutical production is far beyond its potential, even though major manufactures are working under GMP compliance. (American Chamber of Commerce in Ukraine, 2015) Consequently, we can notice that since pharmaceutical industry is under major transformations, it is complicated for both local and foreign bodies to show growth in their segment.

Methodology

This study adopts an interpretivist approach under epistemological path. Often, interpretivism philosophy is used for qualitative studies which are also referred as inductive, aiming to build a better theoretical perspective by using knowledge building approach. Qualitative research studies value social actors and emphasize their importance for the research (Saunders, et al., 2015). The purpose of qualitative research is to uncover views of individuals on the development of TQM in their companies. Moreover, qualitative analysis provides better understanding of the benefits and inhibitors of TQM implementation and gives explanation of how TQM is developed in Eastern Europe.

This study involved data collection through 5 semi-structured interviews. These interviews were conducted with quality managers/ quality specialists working for pharmaceutical companies in Ukraine. The interviews were carried out in a following way. The potential respondents received e-mails with information regarding the purpose of the research, anonymity of responses and voluntary basis. The online link for the survey was included in order to distribute it among the

colleagues. Out of more than 100 pharmaceutical companies randomly contacted in Eastern Europe, only 5 representatives agreed to provide answers to the open ended questions. In order to maintain the anonymity of the respondents, they are numbered from Respondent 1 to Respondent 5. The respondents employ different job roles in the companies and therefore bring the view on TQM from different positions in the company, which is beneficial for the research. Besides, the size of company also varied, as well as the experience of the interviewees.

Findings

Despite all of the interviewees were aware of the fact that effective quality management influences success of the company directly, the results show that TQM in pharmaceutical industry in Eastern Europe is not well developed. In general, this can be verified by the fact that most of the interviewees could not explain TQM principles clearly, provide quality improvement plans and identify methods of quality control in their organisation. However, the similarity of the interviewee responses can be found among the inhibitors of TQM and weaknesses of TQM in pharmaceutical industry. To sum up, the results of 5 interviews show many similarities among different pharmaceutical companies in this region in terms of TQM. The detailed analysis of each section of the questions is provided below.

Part 1 of the questions included general questions. The questions in this part provide information regarding the position of the interviewee in the company, size of the company, experience of the employee in this company and brief overview of quality certificates the company obtains. The results show that managers from different departments in different pharmaceutical companies were interviewed. The size of the company varied from middle-sized (101-500 employees) to large-sized (501 and more employees). Moreover, the interviewees were required to choose quality certification that their company obtains. The result shows that only one out of 5 companies had quality certification ISO 9001. After this general information, more detailed data about TQM in the company was required, leading to part 2 of the interview questionnaire.

In part 2, awareness of TQM principles, improvement plans and methods of quality control was explored. It has to be noticed that 4 out of 5 interviewees were aware of quality plans, which means that the company provides these plans and emphasizes on their importance for the company's performance. Only two out of five interviewees admitted that they have long term and short term plans, whilst the rest of the respondents provided blurred answers. Moreover, Respondent 5 assumed that not all of the employees in his/her company are aware of the existence of such plans and also suggests more often reconsideration of quality plans which are designed on a one year basis. On the other hand, Respondent 1 stated that the company develops plans for quality improvement for 1 year, but also has short-term plans, 'which are developed after every internal quality audit and meeting of Quality Council – once a month'. Therefore, we can conclude that pharmaceutical manufacturing companies in the same region treat quality plans in different ways, which directly influences their understanding of TQM. Moving to TQM principles awareness, we noticed that all of the respondents could name only 'soft' TQM principles, while it is significantly important for manufacturing companies to employ 'hard' TQM rules. From the responses we can see that methods are not well known by interviewees, since only two out of five could provide an opened answer and explain how they measure quality ('consideration of achieved results', 'meeting with seniors to discuss achievements'). However, these methods are not the only ones which should be used by any organisation.

In part 2 of the interview questionnaire, obstacles of TQM implementation in pharmaceutical industry and weaknesses of TQM development in Eastern Europe were explored. The results of the interviews provide similar responses regarding the inhibitors of TQM implementation thus answering vital questions for this research and meeting the objectives of the research. As an example, Respondent 1 states that the difficulties with TQM implementation rise due to limited understanding of different level of connection between the quality of the product and the performance of the company by managers'. Respondent 4 carries on, saying that the main weakness of TQM in Eastern Europe is lack of knowledge about TQM and linkage between quality improvement and its influence on organisation performance. Respondent 3 stated that lack of information among the employees leads to failure of successful TQM implementation.

To sum up, the results of the interviews reveal the weak sides of TQM awareness in pharmaceutical industry in Eastern Europe and, by stating obstacles of TQM implementation we can see why these weaknesses occur. Improvement of communication regarding TQM between senior management and employees, as well as creating of a specialised role of TQM manager might improve current situation of TQM development in analysed region.

Conclusions

From the findings of the interviews, we can state that level of awareness of TQM and its principles has to be increased. In order to improve level of awareness of TQM in this region, the assessment of knowledge of managers in this sphere is required. Ishikawa (1985) states that the main emphasis of this assessment has to be given to senior managers, since they are the ones in the company who have to be aware about TQM trends. For example, Interviewee 5 considers that employees in the company are not aware of TQM and require further education; however, he/she states that senior managers might know about TQM, but they cannot see 'beneficial side out of effective quality management'. Therefore, middle managers as to Ishikawa (1985) require better understanding of TQM in order to supply this knowledge to other employees in the company. Besides, it is crucial for middle managers to be aware not only of 'soft' TQM principles, but also 'hard'. All 5 respondents while answering question 7 of the interview (Which TQM principles are employed in your organisation and since when. How TQM implementation influenced the performance of the company?) could state only 'soft' principles of TQM (e.g. constant improvement, orientation on consumer, specialised education, training programs). Nonetheless, all of the respondents are from pharmaceutical manufacturing sector and therefore should employ 'hard' TQM principles as well.

This research contributes towards the analysis of current state of TQM, as well as provides understanding of the main TQM obstacles and drivers, which occur while implementing this method on the enterprises. Consequently, pharmaceutical companies will find the research useful due to the fact that it provides understanding of the main inhibitors of TQM and therefore will save managers time to underline the main problems. Moreover, overall employee understanding of TQM and its tools was provided, which leads to understanding whether further training programs regarding TQM, its principles and implementation are required. Moreover, theoretical part provides clearer understanding of 'soft' and 'hard' TQM principles.

Limitations and Future Research

One of the limitations of this research is that only one region was analysed. The researched focused only on Eastern European region. Due to time constraints, other regions were not explored. In case broader research in terms of region will be made in future, it will lead to clearer understanding of TQM in different regions. Consequently, it will enable to provide more examples of best practices which might be implemented in different regions. Moreover, the other limitation is the lack of data which was collected, since this region is described by high unwillingness to provide any kind of corporate information. In case more data was provided, the research could have been more exact.

The research could have provided deeper understanding of TQM in this region in case more companies provided responses on survey and interview. However, due to high level of competition in pharmaceutical industry, the companies were not eager to provide in-depth information regarding TQM development. Therefore if more data was provided, the research could have been more exact.

Future research will therefore focus on collecting more robust data and use other statistical techniques such as correlations, regressions, and structural equation modelling to arrive at a conclusion. Further analysis can also be made by comparison of the state of TQM in Eastern Europe and Western counterparts. Such analysis will lead to better understanding of the gap between these countries in terms of TQM implementation. Furthermore, such analysis will lead to creating new best practices for pharmaceutical companies in this region. This might also help to find similarities of TQM in different countries and therefore recommendations will expand on other countries as well

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