DOI: 10.2478/v10051-012-0005-5

Application of Modern Management Concepts by Polish Companies – Analysis of Research Results

Marek Lisiński, Włodzimierz Sroka, Paweł Brzeziński, Adam Jabłoński, Joanna Stuglik

Academy of Business in Dąbrowa Górnicza, Department of Management, ul. Cieplaka 1c, 41-300 Dąbrowa Górnicza Poland. lisinski@uek.krakow.pl; wsroka@wsb.edu.pl; pbrzezinski@wsb.edu.pl; ajablonski@wsb.edu.pl; jstuglik@wsb.edu.pl

Our article presents the results of research on the use of modern management concepts in companies from the so-called traditional sectors of the economy in Lesser Poland and Silesia Voivodeships. The study group consists of 125 companies operating in metallurgy- and steel-related sectors such as machinery, coke, mining and energy. Studies have confirmed that the companies surveyed utilise modern management concepts in their activities, although such utilisation is highly diverse (only one company pointed out that it does not utilise any such concepts). The most popular management concepts are controlling and outsourcing. In contrast, Balanced Scorecard and Business Process Reengineering belong to the group of rarely used strategies.

Keywords: management concept, controlling, outsourcing, TQM, strategic alliance

1 Introduction

In recent years many new management concepts have been created, e.g. benchmarking, Business Process Reengineering (BPR), lean management, TQM, strategic alliances, network organizations, virtual organizations, and many more. They have been subject to extensive analysis, both theoretical and methodological, in a number of countries. However, relatively little broad empirical research has been devoted to this subject despite the fact that among companies operating in various sectors of the economy we can observe a number of practical examples of entities that have successfully implemented the presented concepts. Such concepts are also increasingly used by Polish companies. It is facilitated by deep relationships between the Polish economy and the global economy, and the presence of global companies in Poland, especially in the central and southern parts of the country.

Therefore, based on the results of aforementioned research, the goal of this article is to show whether and to what extent Polish companies utilise modern management concepts. The study constitutes the second part of the project "The utilization of modern management concepts in the management of selected companies from traditional industries in the Lesser Poland and Silesia Voivodeships". Part I - a theoretical and methodological approach – concentrated on the idea and classification of these management concepts, as well as the determination of the methodological formula of the research. This formed the basis upon which these studies were carried out (Lisinski, 2010).

The choice of regions was mainly dictated by their respective economic importance in Poland. Silesian Voivodeship is one of the best performed economic regions in Poland. It produces 13.7 percent of GDP, which puts the voivodship in second place within the country. In 2008, GDP amounted to 167.9 billion zł, (i.e. ca. 40 billion EUR). Gross domestic product per capita was 108.0 percent of the national average, which places it in the second place in Poland (Rocznik Statystyczny, 2010). Based on the existing resources, the country's largest industrial district was established here. The population of the region is 4.64 million. Although the region is mainly characterized by the concentration of heavy industry (mining, metallurgy, engineering, energy), in the last 20 years there has been a significant change in the nature of the region (the liquidation of many coal mines and steel mills) and the expansion of the automotive industry and suppliers of car components (the investment of such companies as FIAT, Opel, Magneti Marelli).

Lesser Poland Voivodeship also has significant socio-economic potential, although not to the same degree as the Silesia region. It produces 7.4 percent of GDP and is inhabited by 3.3 million people. More than 300 thousand businesses operate in Małopolska, mainly small and medium sized firms.

Received: 27th November 2011; revised 6th January 2012; accepted 8th February 2012

In summary, both regions together constitute over one-fifth of Polish economic capacity. They produce a total of 20.6 percent of Polish GDP, and are inhabited by 7.94 million people (out of a nationwide population of about 38.5 million). Both regions are characterized by high levels of economic growth, and have over 80 universities with about 400 thousand students altogether. This is reflected in the high availability of skilled labor, resulting in a relatively high proportion of foreign investors, including such companies as MAN, Motorola, ArcelorMittal, Pliva, Saint Gobain, Fiat, Opel, CMC amongst others.

2 Review of the literature

Despite the broad popularity of modern management concepts in Poland, up until now there have not been many studies devoted to the knowledge of new management concepts among Polish companies. They were rather the topic of theoretical and methodological deliberations. These papers presented the topic of modern management concepts in different perspectives and industries, focusing also on the various problems arising from their utilisation. Relatively rare, however, they concentrated on the subject of a couple (or even several concepts), while the vast majority have focused their attention on the theoretical approach, describing only a single concept. For example, the monographs of Polish authors such as Sroka (2012), Łącka (2011), Piekarczyk and Zimniewicz (2010) or Cygler (2009) were entirely devoted to the issue of inter-organizational cooperation. They described this topic in a very comprehensive way, concentrating on a variety of aspects of cooperation. In turn, the monograph of Sankowska (2009) is devoted to the virtual organization, whilst Kłos (2009) and Trocki (2001) describe the outsourcing and its basic problems, and Jabłoński (2010) analyses the Balanced Scorecard. The monographs of Zimniewicz (2009), Lisinski et.al (2010) are notable exceptions in Polish literature as they in a comprehensive and orderly fashion present a few selected modern management concepts.

A much wider review of the literature devoted to the modern management concepts is presented in the English-language literature (see e.g. Hammer & Champy, 1993; Boxwell, 1994; Hammer, 1996; Brilman, 2002; Child et al., 2005; Bogan & English, 2006; Gulati, 2007; Soltani et al., 2008, and many others). As in case of Polish literature, they also present rather particular concepts than a wide spectrum of different management concepts. For example, Altinkemer et al. (2011) empirically investigated whether (BPR) is associated with enhanced firm productivity and performance. The analyze firm-level panel data covering the period 1987–2008 using fixed effects and first differencing, standard methods that account for unobservable firm-level effects. They fund out that return on assets drops significantly during the project initiation year. According to fixed effects results, the performance and productivity measures improve in a decreasing manner after project initiation, suggesting that BPR indeed positively affects firm performance on average. In turn, the study of Corredor and Goni (2011) explores the relationship between TQM and company performance. The study uses a sample of Spanish companies that have received TQM prizes at the national or regional level between 1997 and 2003. The findings indicate that TQM pioneers experience performance gains, because of the early implementation of the system; however, late adopters do not experience similar results. The also fund out that companies using a TQM system are not necessarily better than their counterparts are, before putting the system into action. Finalny, the study of Yang et al. (2011) based on data collected from 309 international manufacturing companies analyzes relationships between lean manufacturing practices, environmental management and business performance outcomes (e.g., market and financial performance). The scholars' findings suggest that previous lean manufacturing experiences are positively related to environmental management practices. The paper also provides empirical evidences that environmental management practices become an important factor to resolve the conflicts between lean manufacturing and environmental performance[1].

However it should be emphasized that the most of the presented items, both Polish and English, present modern management concepts from a theoretical point of view. If one of them focuses on research, it usually relates to one of these concepts, only. There is a lack of a broader and comprehensive perspective on all methods. This study tries to fill a gap in this field.

3 Methodology

This research aims to identify the scale and scope of the use of modern management concepts in selected sectors of the Polish economy. It was conducted in several main areas:

- use of modern management concepts,
- factors inducing companies to apply the management concepts,
- benefits from the application of modern management concepts,
- competences obtained through the use of modern management concepts,
- competences needed for the implementation of modern management concepts,
- measurement of the effectiveness of the concepts.

The research subject included a group of 125 companies operating in five traditional sectors of the Polish economy: metallurgy and steel-related sectors such as machinery, coke, mining and energy. Questionnaires were sent to the companies which, under the Pareto rule, represent a minimum 80 percent (and in some sectors even 100 percent) of the production potential of the given sector. It was assumed that the questionnaires - if possible – should be completed by managers representing at least midle or, where possible, the highest management levels.

1 Presented review of the literature is not exhaustive. However, it presents the latest papers which are devoted to the theme of modern management concepts.

The research was conducted between February and October 2011. Proposed answers were provided in each of the analyzed areas, i.e. respondents were asked to comment on the proposed statement, answering "yes" or "no"; or to indicate the correct answer on a scale of 1 to 5 (1 - minor importance, 5 - very high importance); or finally to submit their own proposals.

After about a month during which the questionnaires were dispatched, all respondents were contacted by telephone to obtain follow-up information. Due to the limited effectiveness of the process, after several months all the questionnaires were re-sent to those entities that had not responded. This stage was followed by telephone contact (in some cases, several times) during the next 2-3 weeks. A total of 90 responses were finally received, representing 72 percent of the research sample, and including 31 completed questionnaires. The responses received allowed us to evaluate the utilisation of modern management concept amongst companies from the traditional sectors of the Polish economy, and to draw interesting conclusions from the aforementioned research.

4 Analysis of the results

The companies surveyed represent various entities in terms of employment, annual sales and markets served.

Employment

up to 100 people - 5 companies; 101-200 people - 4 companies; 201-500 people - 4 companies; more than 500 people - 16 companies.

Markets served

local - 2 companies; regional - 1 company; national - 6 companies; international - 19 companies.

Annual sales in PLN

1 - 10 million - 1 company; 11 - 20 million - 2 companies; 21 - 50 million - 6 companies; 51-100 million - 2 companies; 101-500 million - 6 companies; more than 500 million - 11 companies.

Not all companies responded regarding employment, scope of operations or annual sales. In turn, not all of the surveyed companies indicated the markets on which they were active, from local to international. Notwithstanding these limitations, it should be noted that the vast majority of surveyed companies are very large entities (both in terms of employment size and annual sales) which operate internationally.

4.1 The companies' use of modern management concepts

The vast majority of companies utilise several concepts simultaneously. Only one company indicated that it does not use any of them. The most popular management concepts are controlling and outsourcing (26 and 25 indications respectively). In turn, Balanced Scorecard (BSC) and Business Process Reengineering (BPR) were least popular (5 indications each). Relatively large companies also indicated the use of benchmarking and lean management (20 and 16 indications respectively), while the use of TQM and inter-organizational cooperation strategies were indicated by 11 and 9 companies.

Some companies responded that they apply only certain elements of some concepts (mainly BSC), or use them in part. On the other hand, some companies, including the relatively small firms, replied that they apply all the management concepts. Such a response may be questionable, especially given that very large companies use selected concepts only.

The popularity of controlling and outsourcing is not surprising, because since the 1990s. they have been shown to be the most commonly utilised strategies. This stems largely from the historical conditions in which companies conducted business, and restructuring activities undertaken by many entities. These consisted mainly of the spinning-off of activities not related directly to the so-called core business, and the creation of separate entities. Such companies often continue to operate in the capital structures of particular entities. Such a situation could be observed in the steel industry and outsourcing processes were related to the activities including, inter alia, protection of property, maintenance, medical services, transportation, accounting, and others. These companies operated in this shape until the privatization of the sector, which mostly took place in the years 2004-2006 (Sroka, 2010).

In turn, the low popularity of BPR may be explained by the difficulty in its implementation.

4.2 Factors inducing companies to use the management concepts

Our research did not provide an unambiguous answer to the question of which factors lead individual companies to apply different management concepts. The vast majority of companies indicated several reasons. The most common indications were: "providing flexibility" (20 responses), "reduction of uncertainty" and "provide greater speed and flexibility" (17 responses each). In turn, the least important factors for the companies were: "providing adequate capacity" (15 responses) and "providing access to the resources not held by the company" (11 responses). This indicates that companies are trying to improve (or maintain) their competitive position through the use of modern management concepts.

Respondents indicated also the following factors: "to enable measurement of the objectives, and deviations", "cost optimization", "lower operating costs".

The individual characteristics of the various companies' application of management concepts will be presented at the later stage of this paper.

Use of benchmarking

Benchmarking was the third most popular management concept used by the aforementioned companies. The vast majority of them indicated utilization of several types of benchmarking (although usually not all). Most companies have used external benchmarking (18), followed by internal (10), whereas only two companies have utilised functional benchmarking. Errors were evident in the responses in that companies which indicated the use of benchmarking, and then subsequently described

the utilisation of a particular type therof. Companies therefore seem not to use benchmarking in the manner described.

Some very large companies do not apply benchmarking principles, which may indicate that they see no need to compare themselves to the competitors.

Use of controlling

Controlling was the most commonly used concept amongst the surveyed entities. Research has shown that two types of controlling are dominant: financial and operational controlling, which were indicated by 21 and 20 companies respectively. On the other hand, only six companies indicated the use of functional controlling. It is also surprising to note, that strategic controlling was used by 13 companies only, an outcome which is difficult to rationally explain.

As in the case of benchmarking, some errors were made. For example, when a company indicated that it does not apply controlling, and subsequently indicated that it uses one (or even more) of the various types. In turn, one company uses the assumptions of business controlling.

Use of inter-organizational cooperation strategies

Inter-organizational cooperation strategies were among the least popular management concepts utilised by the companies (only nine indications). Respondents were able to choose from the following options:

- bilateral alliances in the form of:
  - partial purchase of shares in the partner company,
  - mutual exchange of shares (cross-sharing),
  - creation of a separate entity (a joint venture company),
  - loose agreements such as the appointment of a task team to work in R&D,
- network organization,
- virtual organization.

Respondents mainly favoured the formation of bilateral alliances, among which "loose agreements ..." were strongly dominant (nine responses). Other forms of bilateral alliances were seemingly utilised only two or three times. It is worth noting that two respondents identified the creation of virtual and network organizations, which means that the respondents mainly use the simplest forms of inter-organizational cooperation. On the other hand, it should be noted that virtual organizations, due to their nature, are rather the domain of other sectors of the economy.

As in the case of benchmarking, or controlling, there were evident errors, because certain companies indicated that they did not apply any of these concepts, and then mentioned the use of one (or even a few) of the various types (at least five companies reported such results). The reverse was also true, which may therefore indicate an inaccurate reading of the text of the questionnaire.

Use of lean management

16 companies indicated that they applied lean management. However, as before, errors were visible, because the company indicated that it did not apply the concept of lean management, and then when answering specific questions, indicated the use of one (or even some) of the types thereof. Seven additional companies responded this. It seems that the cause of the fault lay in the fact that the company indicated the application of certain principles of activity (e.g., teamwork, continuous improvement, or the decentralization of decision making), not linking them explicitly to the lean management concept.

Companies could indicate the utilisation of lean management based on:

- just in time,
- TQM philosophy - continuous improvement,
- group work,
- decentralization of decision making,
- customer orientation,
- continuous improvement (Kaizen),
- avoidance of extravagance and waste (Muda),
- the immediate elimination of the causes of errors,
- a continuous flow of materials.

The largest number of responses indicated the utilisation of: "customer orientation" (18), "avoidance of extravagance and waste" (14), "TQM philosophy - continuous improvement" (14), "the immediate elimination of the causes of errors" (11). Other responses ranged from three to seven indications.

One company responded that it applies lean management based on the 5S method. Another, in turn, indicated that it partially applies the principles of lean management.

Use of outsourcing

The concept of outsourcing was one of the most commonly used by the companies surveyed (25 responses). Companies could indicate the use of outsourcing by:

- reduction of the company's organizational structure, and reducing the number of management levels,
- employment reduction,
- outsourcing of business processes,
- outsourcing of processing and information management,
- IT outsourcing,
- outsourcing of HR functions,
- payroll,
- staff leasing.

Of these, two concepts were most frequently indicated: "reduction of the company's organizational structure, and reducing the number of management levels" and "employment reduction" – responses of this type were given by 15 and 18 companies respectively. All other proposals were much less popular (less than 10 indications). Relatively little interest in the outsourcing of IT and HR functions is surprising, as they are generally amongst the most commonly used. Nine and four companies indicated the utilisation of these concepts respectively. This is partly consistent with the claims of Andrews and Foley (2004), according to whom, the concept of outsourcing has been used mainly in the IT field in the late twentieth century. However, nowadays we are able to see its dynamic development in other industries, primarily in the area

of human resource management. Responses were also provided by single companies which use all types of outsourcing.

Use of the Balanced Scorecard

Similarly to the concept of Business Process Reengineering, the Balanced Scorecard is among the least popular management concepts used by the companies. Only 5 entities indicated the use of this concept. Moreover, as previously, there were also errors in the responses provided.

The respondents had the opportunity to indicate the use of the Balanced Scorecard as:

- movement of the strategy to lower management levels,
- implementation of the concept of value based management,
- to communicate the main objectives of the organization to their employees,
- operations to achieve a competitive advantage in the market,
- materialize a defined business model,
- to motivate staff to performance management.

Of these applications, most companies indicated utilisation of: „communicating the main objectives of the organization to their employees" and „motivate staff to performance management" - 7 and 6 indications respectively. Other applications were identified by between two to four of the respondent companies. Indeed, one company plans to implement this concept in the future.

Use of Business Process Reengineering

Business Process Reengineering was one of the least popular management concepts utilised by the companies, as only 5 entities indicated the use of this concept. However, as before, respondents made errors in their responses. In this case four companies returned an erroneous questionnaire.

The companies surveyed had the opportunity to indicate the use of Business Process Reengineering for following reasons:

- implementation of a process approach in the organization,
- change to the existing organizational structure,
- improvement of costs, quality, and service.

Four companies indicated the use of BPR for the "implementation of a process approach in the organization"; eight utilized it in order to "change to the existing organizational structure"; and five to "improve their costs, quality, and service". One company indicated that the organization had been partially re-designed, but the changes could hardly be described as radical (due to legal restrictions). Another one, in turn, pointed to all possible applications of BPR.

Use of Total Quality Management

11 companies indicated for the use of Total Quality Management. However, as before, errors occurred in the responses given (3 indications). The companies were able to indicate the utilisation of Total Quality Management for different purposes (applications), such as:

- to become an organization focused on the client,
- to motivate staff to work effectively,
- the implementation of a process approach in the organization,
- to implement a systemic approach in the organization,
- the implementation of the principles of continuous improvement.

Table 1. Benefits of modern management concepts

No.	Benefits	Importance (1-5 points)*
1.	Access to resources	3,60
2.	Extension of capabilities to better meet customer needs	3,87
3.	Maximizing the value chain synergies and economies of scale	3,27
4.	Improvement of the company's strategic position	3,77
5.	Strengthening relationships with customers and suppliers	4,00
6.	Reduction of risk and uncertainty	3,70
7.	Better coordination and acceleration of activities in the value chain	2,93
8.	**Increase flexibility and efficiency**	**4,07**
9.	Distribution of R&D costs	2,53
10.	Reduction of inventories	2,77
11.	Access to the workforce	2,60

** 1- low importance, 5 - high importance*

The number of companies which indicated the use of TQM also determines the comparative popularity of its possible applications. Of these possibilities, the most popular were: "the implementation of the principles of continuous improvement" (14 responses), and "implementation of a process approach in the organization" (12 responses). Other applications were indicated by 8 and 9 indications respectively. It is interesting that three companies indicated the utilisation of this concept for all given purposes.

4.3 Benefits of the application of modern management concepts

An analysis of the benefits of modern management concepts leads to two main conclusions. Firstly, the companies indicated the diverse benefits of the use of modern management concepts, although none of them played a dominant role. Secondly, the diversity of these benefits most probably gave rise to a relatively even range of responses in terms of the importance of the concepts (from 2,53 to 4,07 points). This is illustrated in Table 1.

The companies' responses were highly differentiated. For some of them, only one of the factors was very important, while for others its significance was marginal. The greatest benefits according to the respondents were: »increase flexibility and efficiency« - 4,07 points, »strengthening relationships with customers and suppliers« (4,00 points), and the »extension of capabilities to better meet customer needs« (3,87 points). In turn, the least important to respondents were: »distribution of R&D costs« (2,53 points), and »access to the workforce« (2,60 points).

It should be noted that some companies, even those that used different approaches, found only minimal benefits of their use. For two of them, the average assessment of the importance amounted to 2,63 points (out of 5), slightly more than half. One company reported 2,36 points, the other only 1,63 points. Indeed, one company indicated only 0,72 points. A score of less than 2 points relates to those entities that indicated only some of the benefits, which therefore indicates the low benefits achieved through the application of the concept.

On the other hand, among those who claimed to have achieved the greatest benefits, the highest score was 4,72 points (one company).

4.4 Competences gained through the use of modern management concepts

Table 2 presents the competences gained through the use of modern management concepts.

The range of difference amongst the responsesis is quite small, in that the difference between the highest and lowest score amounts to 0,60 points only. Companies especially indicated the importance of competence related to »better understanding of the needs of customers« (3,97 points), and »access to knowledge and information« (3,80 points). On the other hand, the importance of individual factors were not equally important for all companies. The answers obtained also indicate that the companies are not completely satisfied with the competences that have been gained through the implementation of the concepts, as the highest score was less than 4 points (only two respondents identified the maximum score in each concept). This may also indicate some difficulty in measuring effectiveness.

4.5 Competences necessary for the implementation of modern management concepts

Table 3 presents the competences necessary for the implementation of modern management concepts.

According to the respondents, as many as eight out of 10 competences presented in Table 3 were important in the successful implementation of modern management concepts. Moreover, the differences between them were very small (from 3,71 to 4,13 points). Only two competences were less important, i.e. the „tact and sensitivity" (2,61 points), and „intercultural awareness" (2,74 points). This may raise some doubts, because the implementation of any strategy - including a new management concept - is often associated with radical activity, but should be accompanied by tact and sensitivity. On the other hand, the relatively low importance of intercultural awareness is probably the result of the relatively small internationalization of the entities, which therefore means that there is no need to prioritise this particular competence.

It is also worth noting that two companies gave 5 points to each of these competences, while others emphasized the importance of only certain, selected competences.

Table 2. Competences gained through the use of modern management concepts

No.	Competence	Importance (1-5 points)*
1.	Access to knowledge and information	3,80
2.	Better knowledge of business	3,37
3.	**Better understanding of the needs of customers**	**3,97**
4.	Greater awareness of the competence of other companies	3,43
5.	Ability to cooperate with other people	3,53

** 1- low importance, 5 – high importance*

Table 3. Competences necessary for the implementation of modern management concepts

No.	Competence	Importance (1-5 points)*
1.	Expert knowledge	3,81
2.	Perspective thinking	4,03
3.	Flexibility	4,06
4.	Ability to simultaneously consider multiple points of view	3,97
5.	**Ability to learn from the past**	**4,13**
6.	Creativity and pragmatism	4,03
7.	Credibility and respectability and prestige among employees	3,71
8.	Tact and sensitivity	2,61
9.	Intercultural awareness	2,74
10.	Communication skills	4,06

**1 - low importance, 5 - high importance*

4.6 Measuring the efficiency of the application of modern management concepts

As can be expected, the measurement of the effectiveness of the use of modern management concepts usually involves economic aspects (29 responses). The companies surveyed mainly provided several answers simultaneously. Responses related to the measurement of efficiency may give rise to an element of surprise in the context of harmonious relationships between organizational units (16 responses), because harmonious cooperation between the parties is not always the primary measure of cooperation and periodic friction or conflicts may be evidence of beneficial cooperation (Chwistecka-Dudek & Sroka, 2008).

5 Conclusions

Our research has confirmed that companies from traditional sectors of the economy utilise modern management concepts in their operations, although the respective popularity of those concepts is highly differentiated. Only one company pointed out that it does not use any of them. The most popular concepts were controlling and outsourcing. In turn, Balanced Scorecard and Business Process Reengineering are amongst the least popular concepts used by the respondents. The low popularity of inter-organizational cooperation strategies (alliances, and networks), despite their increasing proliferation on a worldwide scale, is surprising[2]. However, the data presented confirms the claim that modern management concepts are not only the domain of high-tech sectors. On the other hand, this implies a need for further research on the presented topics, especially in times of global economic crisis, which is forcing companies to seek new sources of competitive advantage.

The indications received regarding the use of modern management concepts were seemingly confirmed by the benefits that those companies derive from their use. These benefits were varied, and all the responses seem to have been formed relatively evenly, although there were also entities that are not fully satisfied with the results of implementation and utilisation of the concepts.

It is also necessary to point out some limitations of the study. Although it covered a relatively large research sample (125 companies), and a total of 90 responses were obtained, only 31 completed questionnaires were eventually received. In other words, this data determines the nature of a pilotage study. Secondly, because of the errors observed in the course of carrying out research, further studies should be conducted with more complete participation of representatives from the companies surveyed. However, this may be difficult because of the apparent unwillingness of respondents to participate in the research. It seems that some form of cyclical research, for example, conducted every 5-10 years would allow researchers to obtain more valid data and provide some indications to the direction of the evolution of companies from these sectors.

References

Altinkemer, K., Ozcelik, Y. & and Ozdemir Zafer, D. (2011). Productivity and performance effects of Business Process Reengineering: a firm-level analysis, *Journal of Management Information Systems,* 27(4): 129–161. DOI 10.2753/MIS0742-1222270405.

2 For example, it is estimated that approximately 10-20 percent of revenues earned by global corporations is generated by their cooperation with other companies (Chaturvedi & Gaur, 2009).

Andrews, N. & Foley, J. (2004). Step by step to successful HR outsourcing, *Human Resource Management,* 12(7): 29-33. DOI 10.1108/09670730410563865.

Brilman, J. (2002). *Nowoczesne koncepcje i metody zarządzania* [New concepts and management methods], PWE, Warszawa.

Bogan, Ch.E. & English, M.J. (2006). *Benchmarking jako klucz do najlepszych praktyk* [Benchmarking as the key to best practices], Helion, Gliwice.

Boxwell, R.J. Jr (1994). *Benchmarking for competitive advantage*, New York: McGraw-Hill.

Chaturvedi, S. & Gaur, A.S. (2009). A dynamic model of trust and commitment development in strategic alliances, *IIMB Management Review,* September, 173-188.

Child, J., Faulkner, D. & Tallman, S. (2005). *Cooperative strategy. Managing alliances, networks and joint ventures,* Oxford University Press, 2nd edition, Oxford.

Chwistecka-Dudek, H. & Sroka, W. (2008). *Alianse strategiczne: problemy teorii i dylematy praktyki*, [Strategic alliances: problems of theory and dilemmas of practice], Wyd. Wyższej Szkoły Biznesu w Dąbrowie Górniczej, Dąbrowa Górnicza.

Corredor, P.& Goñi, S. (2011). TQM and performance: Is the relationship so obvious?, *Journal of Business Research,* 64(8): 830-838. DOI 10.1016/j.jbusres.2010.10.002

Cygler, J. (2009), *Kooperencja przedsiębiorstw. Czynniki sektorowe i korporacyjne [Co-opetition of enterprises*. Sectoral and corporational factors], Wyd. Szkoły Głównej Handlowej w Warszawie, Warszawa.

Gulati, R.(2007). *Managing network resources. Alliances, affiliations and other relational assets*, Oxford University Press.

Hammer, M. (1996). *Beyond reengineering. How the process-centered organization is changing our work and our lives*, Harper Collins Publishers, New York.

Hammer, M., Champy, J. (1993). *Reengineering the Corporation. A Manifesto for Business Revolution*, Harper Collins Publ., New York.

Jabłoński, A. (ed.) (2010). *Zarządzanie wartością przedsiębiorstwa i strategiczna karta wyników* [Management of enterprise' value and Balanced Scorecard], Wyd. Wyższej Szkoły Biznesu w Dąbrowie Górniczej, Dąbrowa Górnicza.

Kłos, M. (2009). *Outsourcing w polskich przedsiębiorstwach* [Outsourcing in Polish enterprises], CeDeWu, Warszawa.

Lisiński, M. (ed.) (2010). *Wykorzystanie nowoczesnych koncepcji zarządzania w kierowaniu wybranymi przedsiębiorstwami z tzw. tradycyjnych sektorów gospodarki w woj. małopolskim i śląskim. Część I – podstawy teoretyczno – metodologiczne* [The use of modern management concepts in the management of selected companies from the so-called traditional sectors of economy in the Lesser Poland Voivodeship and Silesia. Part I. - theoretical and methodological assumptions], Wyd. Wyższej Szkoły Biznesu w Dąbrowie Górniczej, Dąbrowa Górnicza.

Łącka, I. (2011). *Współpraca technologiczna polskich instytucji naukowych i badawczych z przedsiębiorstwami jako czynnik wzrostu innowacyjności polskiej gospodarki* [Technological cooperation of polish scientific and research entities with enterprises as a factor of innovativeness growth of the Polish economy], Wyd. Zachodniopomorskiego Uniwersytetu Technologicznego w Szczecinie, Szczecin.

Piekarczyk, A., Zieniewicz, K. (2010). *Myślenie sieciowe w teorii i praktyce* [Network thinking in theory and practice], PWE, Warszawa.

Rocznik Statystyczny Województw [Statistical Yearbook of Voivodeshipes] 2010. Główny Urząd Statystyczny, Warszawa, 86-87.

Sankowska, A. (2009). *Organizacja wirtualna* [Virtual organization], Wyd.Akademickie i Profesjonalne, Warszawa 2009.

Soltani, E., Lai, P.C. & Javadeen, S.R.S. (2008). A review of the theory and practice of managing TQM: An integrative Framework, *Total Quality Management,* 19(5): 461-479. DOI 10.1080/14783360802018103

Sroka, W. (2010). *Organizacje sieciowe w hutnictwie: przypadek outsourcingu* [Network organizations in the steel industry: case of outsourcing], (in:) A.Jabłoński (ed.) Zarządzanie wartością przedsiębiorstwa i strategiczna karta wyników, Wyd. Wyższej Szkoły Biznesu w Dąbrowie Górniczej, Dąbrowa Górnicza, 57-78.

Sroka, W. (2012). *Sieci aliansów. Poszukiwanie przewagi konkurencyjnej poprzez współpracę* [Alliance networks. Looking for the competitive advantage through cooperation], PWE, Warszawa.

Trocki, M. (2001). *Outsourcing* [Outsourcing], PWE, Warszawa.

Yang, Ma Ga (Mark), Hong, P. & Modi, S. (2011). Impact of lean manufacturing and environmental management on business performance: an empirical study of manufacturing firms, *International Journal of Production Economics,* 129(2): 251-261. DOI 10.1016/j.ijpe.2010.10.017

Zimniewicz, K. (2009). *Współczesne koncepcje i metody zarządzania* [Contemporary concepts and management methods], PWE, Warszawa.

Marek Lisinski is a full professor of economics. Currently he runs the Department of Strategic Analysis at Krakow University of Economics and Management Department at the Academy of Business in Dąbrowa Górnicza. He is also a member of the Polish Accreditation Commission. He published over 150 scientific papers, including books, scripts, and teaching materials. Specialization activity of professor Lisiński includes methodology of management science, strategic management, methods of formulating and strategy implementation, internal audit methodologies, and strategic controlling.

Wlodzimierz Sroka has received his Ph.D title from Karol Adamiecki University of Economics in Katowice. He holds his Ph.D., M.Sc. and B.Sc. degrees in Management and Marketing at the University of Economics in Katowice. Currently he is the Assistant Professor at the Academy of Business in Dąbrowa Górnicza, and simultaneously is a president of a medium-size engineering company. Previously he has been working in different managerial positions both in the steel industry and machine industry. He is the author of scientific articles about strategic alliances, mergers and acquisitions, strategy, restructuring and networks published both in Polish and international journals. His research activities mainly include cooperative strategies, and mergers and acquisitions.

Paweł Brzeziński is an assistant at Academy of Business in Dąbrowa Górnicza. His research activities includes mainly joint ventures, and modern management concepts.

Adam Jabłoński holds his Ph.D title in Economic Sciences, specializing in Management Science. Currently he serves as Vice-Rector for Development at Academy of Business in Dąbrowa Górnicza and Vice-President of a reputable consulting company OTTIMA plus. His scientific activities concentrates on modern and efficient business models,

including sustainability business models. He is the author of a variety of studies and business analyses about value management, risk management, balanced scorecard, and corporate social responsibility. He has also written and co-written several monographs, and over a hundred of scientific articles in the field of management. He also has been working for many years as the leading auditor of quality, environment and safety management systems.

Joanna Stuglik has received his Ph.D title from Oskar Lange University of Economics in Wrocław. Currently she is the Chief of the faculty of Management and Engineering of Production at the Academy of Business in Dąbrowa Górnicza. Her specialization activity includes mainly strategic management and finance. She also owns business experience as economic department head, cost- and financial controller, chief accountant and member of Supervisory Boards in different enterprises. She is the author of many publications, analyses, and restructuring programs.