International Journal of Management, Knowledge and Learning, 5(1), 23–36

The Importance of Attitude to Knowledge and Innovation for Performance of Manufacturing Enterprises Operating Either Locally Or Internationally

Marcin Soniewicki
Poznan University of Economics and Business, Poland

Today knowledge management actions and innovation processes are very specific and complex topics. That is why this publication is focused on small and narrow aspect of these issues – their perception in only one category of entities, which are manufacturing companies. This paper analyzes and compares the attitude to knowledge management and innovation amid manufacturing enterprises operating locally only or internationally. It also checks the influence of various approaches to studied issues on creating mentioned businesses' competitive advantage. Empirical study, in which 331 companies took part, has shown that enterprises in international process appreciate knowledge management and innovation more than their counterparts operating only on the local markets. Moreover, the research results demonstrated that knowledge and innovation appreciation by managers and employees is important for competitive advantage of every kind of manufacturing enterprises. Nevertheless, it is crucial to remember for those firms involved on foreign markets – the more a company is engaged in international operations the more attention it should pay to its knowledge and innovation processes.

Keywords: knowledge, knowledge management, innovation, manufacturing, internationalization, competitive advantage, competitiveness.

Introduction

The goal of this article is to examine the attitude to knowledge and innovation in manufacturing companies operating locally and undergoing the process of internationalization and to investigate how the perception of these issues affects the creation of competitive advantage by manufacturing companies with various scales of operations.

Economic changes that we have witnessed in the recent decades – the increasing intensity of globalization, the growing importance of knowledge, often referred to as knowledge-based economy – pose new challenges for companies. To remain competitive they need to manage their knowledge resources much more effectively and must constantly innovate. The situation

in this respect often differs depending on industry. That is why the focus of this article is narrowed down to manufacturing companies. In the recent years there has been a lot of research interest in the service industry, reflecting its growing importance. Nevertheless, the manufacturing industry is still very important but knowledge and innovation issues have not been so well studied in this type of companies.

Another characteristic of many present-day companies is that they often need to expand their operations to other countries to develop and remain competitive – they need to start the process of internationalization. It is a very demanding course and, as can be expected, it requires even more concentration on knowledge and innovation. In fact, effective actions in these areas are more important for them to remain competitive.

The problem area described above covers a number of broad issues. That is why this article concentrates on a narrow aspect, namely attitudes to knowledge and innovation processes that pervade companies. An appropriate attitude of employees is the first step in creating proper knowledge management and innovation processes. The task of organizing this sort of activities is very complicated and delicate and cannot be executed effectively without being perceived as an important step: when the management and employees do not consider these processes as important they cannot conduct them well.

The abstract of this paper was presented and published at the Make-Learn&TIIM 2016 International Conference.

Literature Review

One of the most important developments that has shaped the conditions in which present-day companies operate was the fundamental change in the role of knowledge in economic processes (Nijkamp & Siedschlag, 2011, p. 15). While the importance of this resource in the past cannot be denied, now its role has become 'dominant' (Welfe, 2007, p. 9). This development was already recognized by OECD in 1996 in a report entitled 'Knowledge Based Economy' (OECD, 1996, p. 1), which popularized the term. Nevertheless, in the literature there is no single, commonly accepted definition of knowledge-based economy (Karlsson, Johansson, & Sough, 2006, p. 12). In general, knowledge-based economy is characterized by the development of fields related to information processing, high technology and information society (Moszkowicz & Kubiński, 2010, pp. 133–134). In this economy, the human brain is a very important or even the main asset for companies (Bratianu & Dinca, 2010, p. 219). Recent decades have also seen the growing popularity of the word 'innovation.' In the literature one can also find the term 'innovative economy' or similar ones. Gaczek (2009) emphasizes that many authors use this term without the explicit assumption that proper

knowledge processes are an essential and inseparable element in creating innovation.

In order to remain competitive, companies need to adjust to emerging economic conditions. They need to make a more effective use of the knowledge they have collected (Handzic & Zhou, 2005, pp. 3–4), as this resource determines the success and even the very survival of modern firms (Jashapara, 2006, p. 24; Paliszkiewicz, 2007, p. 35). Some studies even conclude that average companies use less than half of the knowledge they have (Kowalczyk & Nogalski, 2007, p. 103). There are many concepts that have been created in order to help companies in this respect (Soniewicki, 2015a, p. 45). Nevertheless, the most popular one is knowledge management. It is understood as a response of companies to changes in the global economy (Handzic & Zhou, 2005, p. 3). In the literature there are many definitions of this concept; arguably one of the best was formulated by Paliszkiewicz (2007), who describes knowledge management as a 'systematic and organized process of finding, acquiring, transfer, use and saving knowledge resource that uses adequate technologies as well as cultural elements in order to improve the company's performance' (p. 38).

Nevertheless, knowledge management for a present-day enterprise is only a tool. It is the tool that helps companies to operate more effectively, particularly by supporting innovations. In the past, firms could produce the same product for years in almost the same form. Today this strategy is no longer viable. Companies very often have to update their product or even entirely change their offer. They have to constantly innovate.

Companies' innovativeness is deeply connected with their knowledge management. Many authors underline that properly organized knowledge management processes increase enterprises' innovativeness (Hawryszkiewicz, 2010, p. 77; Ahmed, Lim, & Loh, 2002, p. 4; Koskinen & Pihlanto, 2008, p. 25). Wickramsinghe and von Lubitz even regard this concept as the key element in maintaining innovation in a company (Bali, Wickramasinghe, & Lahaney, 2009, p. 1). Liebowitz even describes knowledge management as 'innovation catalyst' (Liebowitz, 2008, p. 4).

Gaczek (2009, p. 27) points out that a knowledge-based economy differs from an industrial economy, which was dominated by manufacturing companies. Nowadays these companies are still important, but researchers, especially as far as knowledge is concerned, have concentrated on service companies, where the importance of knowledge is obvious (Grönroos, 2005, pp. 8–9; Soniewicki, 2014, p. 2, 2015b). However, in the literature it is also emphasized that knowledge should be regarded as a 'unique production factor' (Szromnik, 2013, p. 9). Pasher and Ronen (2011, pp. 1–2) consider knowledge management to be a helpful tool for companies in creating new products. The importance of knowledge management activities

for manufacturing companies has been recognized by the Economist Intelligence Unit (2007). Nevertheless, the issue of knowledge has not been well examined in the context of manufacturing companies (Soniewicki, 2015b).

Knowledge management, innovation and their influence on companies' performance are very broad matters, so this article concentrates only on one aspect – the attitude towards and awareness of these issues among the staff of manufacturing firms. In fact, a number of companies do not understand the idea of knowledge management (Ahmed et al., 2002, p. 5). Moreover, the lack of awareness of the importance of knowledge in companies is one of the common barriers inhibiting knowledge flow in companies (Anantatmula, 2008). To remain competitive, enterprises also need to be aware of what knowledge resources they already have and what sort of knowledge they need to gain to achieve their goals (Geisler & Wickramasinghe, 2009).

The significance of the attitude towards knowledge and the awareness of its importance comes from the fact that knowledge is a human characteristic and its management is basically performed in the course of social processes (Karwowski, 2010, p. 77). That is why one of the tasks of managers of today's enterprises should be developing employees' awareness of the common responsibility for the company's knowledge resource (Paliszkiewicz, 2007, p. 58).

Methodology

This article is based on a quantitative study conducted in Poland in years 2012 and 2013. The study was financed by Preludium 2 grant awarded to the author of this article by The National Science Center. The sampling frame for the survey was a business directory maintained by Kompass Poland. The survey questionnaire was developed in electronic and paper version. The electronic questionnaire was distributed through a surveying system developed by the author with the assistance of a computer scientist. This method helped to obtain a better response rate, thanks to a user-friendly questionnaire interface and well planned reminders sent only to those respondents who did not fill the questionnaire. The survey was conducted among companies from all industries but for purposes of analyses presented in this article only companies operating in the manufacturing industry were taken into account. A total of 1200 companies were surveyed, including 331 manufacturing firms. 80 percent of these companies were involved in the process of internationalization (Table 1).

Companies operating in foreign markets can be divided into groups depending on the form of their international operations. In the case of companies using several different forms, the most advanced form was taken into account. The order of forms of internationalization, from the least (top) to

Table 1 The Number of Manufacturing Enterprises in the Sample by Scale of Operations

Scale of operations	No.
Companies operating locally	66
Companies in the process of internationalization	265
Total	331

Table 2 The Number of Enterprises in the Sample by the Most Advanced Form of Foreign Activity

The most advanced form of the company's foreign activity	No.
Export or import	177
Subcontracting	49
Non-equity cooperation (licensing, franchising)	7
Equity cooperation (joint venture)	8
Foreign Direct Investment (FDI)	24
Total	265

Table 3 The Number of Enterprises in the Sample by Intensity of Foreign Activity

The intensity of the company's foreign activity	No.
Low (export, import, subcontracting)	226
High (non-equity cooperation, equity cooperation, foreign direct investment)	39
Total	265

the most (bottom) advanced is shown in Table 2. The table also shows the number of companies in the sample for which particular forms of foreign activity are most advanced. As can be seen, most of these companies are importers or exporters. A substantial number of companies use foreign direct investment and subcontracting. The least popular forms are non-equity and equity cooperation.

The forms of internationalization distinguished above were then assigned into two broad categories: low intensity of foreign operations – export, import and subcontracting – and high intensity of foreign operations – non-equity cooperation, equity cooperation and foreign direct investment. The number of companies classified into each category is shown in Table 3. The majority of companies – 85 percent – are characterized by low intensity of foreign activity.

As mentioned in the introduction, the goal of this article is to examine the role of the attitude to knowledge and innovation among manufacturing companies in creating their competitive advantage. In order to achieve this goal, the author created an AKI Index – Attitude to Knowledge and Innovation Index. It consists of four questions, formulated on the basis of the literature (Table 4). Answers to these questions were measured on a 5-point Likert scale, where 1 represents very low and 5 – very high. The purpose of the

Table 4 Questions on Which the AKI Index is Based

Key aspect covered by the question	Detailed question
Importance of knowledge development	From the point of view of our company's strategy, constant development of new knowledge is the most important part of our competition in the market
Identification of knowledge gaps	Our company regularly identifies its knowledge gaps and needs in terms of information and knowledge
Active use of company's knowledge resources	Information and knowledge gathered by our company is actively used in its everyday operations, especially when making decisions
Constant innovation, e.g., continuous development of new products or services	Our company constantly works on new products and/or services and organizational improvements

Notes Based on Darroch (2003, p. 47), Probst, Raub, and Romhardt (2004, p. 111), Pasher and Ronen (2011, p. 35, 36) and Wang, Hult, Ketchen, and Ahmed (2009, pp. 118–120).

questions was to examine prevailing attitudes to knowledge and innovation in a specific group of companies. Analyzing activities intended to increase companies' innovativeness or improve their knowledge management falls outside the scope of this article.

Competitiveness of enterprises in the sample was measured using a Competitiveness Index created by Fonfara (2009). It consists of four financial and non-financial measures. The reliability of this instrument has already been tested by many authors (Fonfara, 2009, 2012; Ratajczak-Mrozek, 2010; Soniewicki, 2015a).

In order to check the statistical significance of differences Mann-Whitney U test using SPSS statistical package has been used. It is a nonparametric alternative of *t*-Student test for two averages. It has been chosen due to the fact that analyzed variables did not meet the condition of normality.

Research Results

This section presents two main kinds of quantitative results. It starts with the findings concerning the attitude to knowledge and innovation in various types of manufacturing companies. The attitude was measured by the AKI Index and its component factors. The second part of this section is devoted to findings about the competitiveness of specific types of manufacturing companies depending on their levels of AKI Index.

Table 5 shows the intensity of the AKI Index and its component factors for companies operating locally and undergoing the process of internationalization.

According to Table 5, the value of the AKI Index is higher in companies undergoing internationalization than in companies operating locally. This

Table 5 The Intensity of AKI Index and Its Component Factors in Companies Operating Locally and Undergoing Internationalization

The question's key aspect	(1)	(2)	(3)	(4)
Importance of knowledge development	3.45	3.63	0.18	0.215
Identification of knowledge gaps	3.58	3.68	0.10	0.170
Active use of company's knowledge resource	3.79	3.84	0.05	0.511
Constant innovation, e.g., continuous development of new products or services	3.65	4.07	0.42***	< 0.001
Average (AKI Index)	3.62	3.80	0.19*	0.052

Notes Column headings are as follows: (1) operating only locally, (2) undergoing internationalization, (3) difference (2 – 1), (4) *p*-value (Mann Whitney test). * $p < 0.1$, *** $p < 0.01$.

Table 6 The Intensity of the AKI Index and Its Component Factors in Three Types of Companies: Operating Only Locally and With a Low and High Intensity of Foreign Activity

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a)	3.45	3.58	0.13	0.388	3.90	0.44**	0.024
(b)	3.58	3.67	0.10	0.193	3.72	0.14	0.259
(c)	3.79	3.84	0.05	0.522	3.85	0.06	0.624
(d)	3.65	4.06	0.41***	0.001	4.15	0.50***	0.007
(e)	3.62	3.79	0.17*	0.076	3.90	0.29*	0.060

Notes Column headings are as follows: (1) the question's key aspect, (2) companies operating only locally, (3) companies with low intensity of foreign activity, (4) difference (3 – 2), (5) *p*-value (Mann Whitney test), (6) companies with high intensity of foreign activity, (7) difference (6 – 2), (8) *p*-value (Mann Whitney test). Row headings are as follows: (a) importance of knowledge development, (b) identification of knowledge gaps, (c) active use of company's knowledge resources, (d) constant innovation e.g. continuous development of new products or services, (e) average (AKI Index). * $p < 0.1$, ** $p < 0.5$, *** $p < 0.01$.

difference (0.19) is also statistically significant. Nevertheless, when looking at differences between particular AKI Index component factors, one can see that only in one case – 'constant innovation' – is the difference statistically significant. However, for each question, the values obtained are higher in companies undergoing internationalization than in those operating locally.

In Table 6, companies undergoing internationalization are divided into two groups – companies with a low intensity of foreign activity (export, import and subcontracting) and those with a high intensity of foreign activity (non-equity cooperation, equity cooperation, foreign direct investment). As can be seen, companies with a high intensity of foreign activity are characterized by higher values of the AKI Index than those with a low intensity of foreign activity.

Table 6 shows differences in values of the AKI Index and its component factors for companies operating locally and two types of companies

Table 7 Competitiveness of Enterprises Depending on Their AKI Index Value

(1)	(2)	(3)	(4)
≤ 3	2.62	–	–
> 3	3.21	0.59***	< 0.001
> 3.5	3.32	0.70***	< 0.001
> 4	3.51	0.89***	< 0.001
> 4.5	3.57	0.95***	< 0.001

Notes Column headings are as follows: (1) AKI Index value, (2) Competitiveness Index, (3) difference, (4) *p*-value (Mann Whitney test). *** $p < 0.01$

Table 8 Competitiveness of Companies Operating Locally and Undergoing Internationalization Depending on Their AKI Index Value – 1

(1)	(2)	(3)
≤ 3	2.63	2.62
> 3	2.99	3.26
Diff.	0.37	0.64***
p-value	0.123	< 0.001

Notes Column headings are as follows: (1) AKI Index value, (2) companies operating only locally, (3) companies undergoing internationalization. *** $p < 0.01$

undergoing internationalization. In the case of companies with a low intensity of foreign activity the differences are quite small. When it comes to companies with a high intensity of foreign activity, the differences are considerable, especially for two component factors – 'importance of knowledge development' and 'constant innovation.'

Table 7 shows the competitiveness of all manufacturing enterprises in the sample depending on their value of the AKI Index. Companies with the AKI Index > 3 are much more competitive. Moreover, the competitiveness of companies grows as the value of the AKI Index increases. All the results are highly significant.

Companies with the AKI Index below 3 are characterized by very low competitiveness (2.62). The value of Competitiveness Index below 3.0 means that a company is less competitive than its closest competitors. A company with Competitive Index higher than 3 can be considered as having competitive advantage.

The results shown in Table 7 indicate the importance of the attitude to knowledge and innovation in manufacturing companies. The differences are large and statistically significant. Nevertheless, it would be interesting to learn whether there are any differences in the importance of the component factors between companies operating only locally and those undergoing internationalization. Such a comparison is shown in Table 8.

According to Table 8, the level of competitiveness in companies with the AKI Index ≤ 3, regardless of their type, is very similar. When the AKI Index > 3, however, companies operating only locally are found to be much less competitive than companies undergoing internationalization with the same level of the AKI Index. According to the definition of the Competitiveness Index, the value of 3.0 means that a company's competitiveness is similar to its closest competitors (Competitiveness Index ranges from 1 to 5).

A different situation can be observed in companies undergoing interna-

Table 9 Competitiveness of Companies Operating Locally and Undergoing Internationalization Depending on Their AKI Index Value – 2

(1)	(2)	(3)	(4)	(5)	(6)	(7)
≤ 3	2.63	–	–	2.62	–	–
> 3	2.99	0.37	0.123	3.26	0.64***	< 0.001
> 3.5	3.11	0.48**	0.037	3.37	0.75***	< 0.001
> 4	3.06	0.44*	0.086	3.58	0.96***	< 0.001
> 4.5	3.08	0.46	0.144	3.67	1.04***	< 0.001

Notes Column headings are as follows: (1) AKI Index value, (2) companies operating only locally, (3) difference, (4) *p*-value (Mann Whitney test), (5) companies undergoing internationalization, (6) difference, (7) *p*-value (Mann Whitney test). * $p < 0.1$, ** $p < 0.5$, *** $p < 0.01$.

tionalization. There is a bigger difference in competitiveness between companies with a low (≤ 3) and high (> 3) value of the AKI Index in this group than between companies operating only locally. The value of the Competitiveness Index for companies undergoing internationalization with a high value of the AKI Index is 3.26. This means that such companies are, on average, more competitive than their closest competitors. This confirms the significance of the attitude to knowledge and innovation for companies undergoing internationalizations. Without the right attitude in this respect, such companies are much less likely to get ahead of their competitors.

The results presented in Table 8 are shown in more detail in Table 9.

Table 9 presents the level of competitiveness in two types of manufacturing companies depending on the value of the AKI Index. In the case of companies operating only locally, their competitiveness increases up to a certain level and then falls and increases again. The lack of statistical significance and an inconsistent pattern of values of the Competitiveness Index are probably due to the small number of such entities in the sample. Manufacturing companies with higher values of the Competitiveness Index tend to expand their operations and get involved in the process of internationalization, thereby moving to the other group. Nevertheless, the results show that in manufacturing companies operating locally an increase in the AKI Index leads to a rise in competitiveness, but only up to the level of 3.5 (AKI Index): above this value competitiveness of such companies does not improve.

In the case of the second group of enterprises (Table 9) – those undergoing internationalization – the situation is different. Competitiveness continues to grow with increasing values of the AKI Index. However, the magnitude of this growth differs. The biggest increase in competitiveness can be observed in the interval between ≤ 3 and > 3 of the AKI Index level. The growth is also substantial between in the interval between > 3.5 and 4.

So far, companies undergoing internationalization have been treated as

Table 10 Competitiveness of Two Types of Companies Undergoing Internationalization Depending on Their AKI Index Value

(1)	(2)	(3)	(4)	(5)	(6)	(7)
≤ 3	2.64	–	–	2.50	–	–
> 3	3.19	0.55***	< 0.001	3.69	1.19**	0.019
> 3.5	3.28	0.63***	< 0.001	3.89	1.39***	0.008
> 4	3.46	0.82***	< 0.001	4.05	1.55***	0.008
> 4.5	3.47	0.82***	< 0.001	4.22	1.72**	0.011

Notes Column headings are as follows: (1) AKI Index value, (2) companies with low intensity of foreign activity, (3) difference, (4) *p*-value (Mann Whitney test), (5) companies with high intensity of foreign activity, (6) difference, (7) *p*-value (Mann Whitney test). * $p < 0.1$, ** $p < 0.5$, *** $p < 0.01$.

one monolithic group, but, in fact, they are not. Companies that concentrate on exports differ in many respects from those engaged in Foreign Direct Investments (FDI). That is why in the following analysis two groups of companies undergoing internationalization are distinguished, depending on the intensity of foreign activity. According to Table 10, the competitiveness of companies undergoing internationalization with a low intensity of foreign activity rises with increasing values of the AKI Index. This trend is to be expected as companies with the AKI Index > 3 are more competitive than their closest competitors. However, the rise in competitiveness is much smaller in comparison with the second group: companies with a high intensity of foreign activity.

Companies with a high intensity of foreign activity and the AKI Index ≤ 3 are much less competitive than their closest competitors (Competitiveness Index: 2.50). Moreover, they are also less competitive than companies with the same value of the AKI Index and a low intensity of foreign activity (Competitiveness Index: 2.64). This indicates that the attitude to knowledge and innovation is crucial for creating competitive advantage by companies strongly engaged in foreign activities. Awareness of the role of these factors has a positive effect for such companies, while any deficiency in this respect interferes with the creation of their competitive advantage.

To conclude, the results show that attitudes to knowledge and innovation are especially important in companies undergoing internationalization and characterized by a high intensity of foreign activity. Without the awareness of the significance of these factors such companies are uncompetitive. On the other hand, any increase in this awareness contributes to improving their competitiveness.

Conclusion

The results of the questionnaire survey conducted among 331 manufacturing companies indicate that the value of the AKI Index is higher in com-

panies undergoing internationalization than in those operating locally. The difference is statistically significant. Furthermore, more detailed analyses of companies operating in foreign markets demonstrate that the importance of knowledge and innovation is also more appreciated in companies with a high intensity of foreign activities. When one considers individual factors making up the AKI Index, the biggest differences between the companies in the sample can be observed for the factors related to 'importance of knowledge development' and 'constant innovation.'

Another aspect analyzed in the article was the influence of the attitude to knowledge and innovation on the competitiveness of manufacturing companies. It has been found that this aspect is important for creating competitive advantage regardless of the type of enterprise, but is especially important for companies undergoing internationalization. However, the role of the attitude to knowledge and innovation on competiveness is not uniform across companies in this group. It is found to be the most important for companies with a high level of foreign activities. Their competitiveness consistently rises with increasing awareness of knowledge and innovation. Moreover, companies in this category which do not appreciate knowledge and innovation too much (AKI Index ≤ 3) are, on average, much less competitive than their competitors (Competitiveness Index: 2.50).

Limitations and Future Research

One needs to remember that the study described in this article concentrates only on the prevailing attitude to knowledge and innovation as revealed in the survey and does not examine particular actions undertaken by these companies in the area of knowledge and innovation. Nevertheless, as research results show, even the examination of attitudes can provide interesting insights. However, the study has certain implicit limitations. The most important one is that representatives of companies surveyed may consider target aspects important but actually not do much about them. Another limitation is connected with sample selection. The sampling frame for the survey was the business directory created by Kompass Poland. However, the database does not contain contact information for all manufacturing companies in Poland. In general, although the sample was quite large (331 entities), it did not contain many particular types of manufacturing firms, for example those producing high technology products.

Future research in this area should concentrate on understanding what sort of activities are undertaken by companies in the field of knowledge and innovation. This kind of studies could show what sort of actions are the most effective for manufacturing companies. This could be investigated not only through quantitative research but also through a qualitative study. The most interesting analyses are often based on both kinds of research. It must be emphasized that detailed analyses usually need to focus on

a particular industry because the company's profile tends to influence its actions in various respects. Moreover, studies in the area of knowledge and innovation should also be conducted among different kinds of companies, from other industries, for example service industry companies.

Acknowledgements

The research has been part of the project financed by the National Science Center, Preludium 2 grant, awarded by virtue of decision no. DEC-2011/03/N/HS4/00429.

References

Ahmed, P. K., Lim, K. K., Loh, A. Y. E. (2002). *Learning through knowledge management.* Oxford, England: Butterworth-Heinemann.

Anantatmula, V. S. (2008). Knowledge management success: Roles of management and leadership. In K. O'Sullivan, *Strategic knowledge management in multinational organizations* (pp. 299–310). London, England: IGI Global.

Bali, R. K., Wickramasinghe, N., & Lahaney, B. (2009). *Knowledge management primer.* London, England: Routledge.

Bratianu, C., & Dinca, V. M. (2010). Knowledge economy dimensions. *Review of International Comparative Management, 11*(2), 210–221.

Darroch, J. (2003). Developing a measure of knowledge management behaviors and practices. *Journal of Knowledge Management, 7*(5), 41–54.

Economist Intelligence Unit. (2007). *Knowledge management in manufacturing.* London, England: Economist Intelligence Unit.

Fonfara, K. (2009). *Zachowanie przedsiębiorstwa w procesie internacjonalizacji – podejście sieciowe.* Warsaw, Poland: Polskie Wydawnictwo Ekonomiczne.

Fonfara, K. (2012). *The development of business networks in the company internationalisation process.* Poznań, Poland: Poznań University of Economics Press.

Gaczek, W. M. (2009). *Gospodarka oparta na wiedzy w regionach europejskich.* Warsaw, Poland: Komitet Przestrzennego Zagospodarowania Kraju PAN.

Geisler, E., & Wickramasinghe, N. (2009). *Principles of knowledge management: Theory, practice, and cases.* London, England: M. E. Sharpe.

Grönroos, C. (2005). *Service management and marketing: A customer relationship management approach.* New York, NY: Wiley.

Handzic, M., & Zhou, A. Z. (2005). *Knowledge management: An integrative approach.* Oxford, England: Chandos.

Hawryszkiewicz, I. (2010). *Knowledge management: Organizing knowledge based enterprises.* London, England: Palgrave Macmillan.

Jashapara, A. (2006). *Zarządzanie wiedzą.* Warsaw, Poland: Polskie Wydawnictwo Ekonomiczne.

Karlsson, C., Johansson, B., & Sough, R. R. (2006). *Entrepreneurship and dynamics in the knowledge economy.* New York, NY: Routledge.

Karwowski, W. (2010). *Zarządzanie wiedzą: O czynnikach ludzkich w organizacji.* Warsaw, Poland: Szkoła Główna Handlowa – Oficyna Wydawnicza.

Koskinen, K. U., & Pihlanto, P. (2008). *Knowledge management in project-based companies: An organic perspective.* London, England: Palgrave Macmillan.

Kowalczyk, A., & Nogalski, B. (2007). *Zarządzanie wiedzą: Koncepcja i narzędzia.* Warsaw, Poland: Difin.

Liebowitz, J. (2008). *Making cents out of knowledge management.* Laham, MD: The Scarecrow Press.

Moszkowicz, M., & Kubiński, P. (2010). Edukacja akademicka a tworzenie w Polsce gospodarki opartej na wiedzy. In M. Hopej, M. Moszkowicz, & J. Skalik, *Wiedza w gospodarce i gospodarka oparta na wiedzy: Edukacja w gospodarce opartej na wiedzy* (133–140). Wrocław, Poland: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.

Nijkamp, P., Siedschlag, I. (2011). *Innovation, growth and competitiveness: Dynamic regions in the knowledge-based world economy.* Berlin, Germany: Springer.

OECD. (1996). *The knowledge-based economy.* Paris, France: Author.

Paliszkiewicz, J. O. (2007). *Zarządzanie wiedzą w małych i średnich przedsiębiorstwach – koncepcja oceny i modele.* Warsaw, Poland: Wydawnictwo SGGW.

Pasher, E., & Ronen, T. (2011). *The complete guide to knowledge management: A strategic plan to leverage your company's intellectual capital.* Hoboken, NY: Wiley.

Probst, G., Raub, S., & Romhardt, K. (2004). *Zarządzanie wiedzą w organizacji.* Kraków, Poland: Oficyna Ekonomiczna.

Ratajczak-Mrozek, M. (2010). *Sieci biznesowe a przewaga konkurencyjna przedsiębiorstw zaawansowanych technologii na rynkach zagranicznych.* Poznań, Poland: Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu.

Soniewicki, M. (2014). The characteristics of knowledge management processes in the Polish service industry companies. *Przegląd Organizacji,* no. 7, 40–46.

Soniewicki, M. (2015a). *The company's international competitive advantage: The role of knowledge.* Warsaw, Poland: Difin.

Soniewicki, M. (2015b). The use of external knowledge sources in manufacturing companies. *Kwartalnik Nauk o Przedsiębiorstwie, 37*(4), 89–97.

Szromnik, A. (2013). Wstęp. In G. Śmigielska, *Źródła konkurencyjności przedsiębiorstw handlowych w gospodarce opartej na wiedzy* (pp. 9–12). Warsaw, Poland: Difin.

Wang, C. L., Hult, G. T. M., Ketchen, D. J., & Ahmed, P. K. (2009). Knowledge management orientation, market orientation, and firm performance: An integration and empirical examination. *Journal of Strategic Marketing, 17*(2), 99–122.

Welfe, W. (2007). *Gospodarka oparta na wiedzy.* Warsaw, Poland: Polskie Wydawnictwo Ekonomiczne.

Marcin Soniewicki is Assistant Professor at Poznan University of Economics and Business. Dr. Soniewicki is author of more than 20 scientific publications

concerning knowledge management, market orientation, companies' internationalization and their competitiveness. *marcin.soniewicki@ue.poznan.pl*