

TOMASZ WNUK-PEL

Management Accounting Innovations

**the Case of ABC
in Poland**



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To my beloved wife Renata

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INTRODUCTION

At the turn of the eighties and nineties of the 20th century management accounting was criticized (e.g. Johnson, Kaplan, 1987; Bromwich, Bhimani, 1989; Innes, Mitchell, 1990). The usefulness of methods used from the beginning of the century was questioned. It was claimed that the methods were inadequate in terms of changing business environment, which was mainly influenced by technological development, global competition and development of IT. In a monograph *Relavance Lost* Johnson and Kaplan (1987) proved that new times demanded new methods of management accounting, and these methods included activity-based costing – ABC.

Activity-based costing emerged in the United States in the late eighties of the 20th century and, subsequently, after a series of articles by Cooper and Kaplan, spread among companies all over the world. In the nineties, both practitioners dealing with implementation of ABC and researchers studying the implementations observed that activity-based costing was something more than just an improved cost evaluation system. They additionally noted that ABC may be a basis for activity-based management – ABM. In the late eighties, but also in the nineties of the 20th century, numerous questionnaire research and research in the form of case studies (among them *action research*) were carried out. They aimed to analyze the process of activity-based costing implementation mainly in the North American and European countries. Some of the research analyzed factors which influence activity-based costing implementation. Anderson (1995), Gosselin (1997) and Krumwiede (1998) studied factors which influence ABC implementation on different stages of the implementation process. Shields (1995), Swenson (1995), Foster and Swenson (1997), McGovan and Klammer (1997) as well as Anderson and Young (1999) analyzed the problem of perception of ABC implementation satisfaction. Kennedy and Affleck-Graves (2001), Cagwin and Bouwman (2002) as well as Ittner *et al.* (2002) studied the influence of activity-based costing on the company's performance.

Since the popularization of activity-based costing and activity-based management in the nineties of the 20th century, the two concepts have been

extremely popular among companies all over the world. However, implementation of the ABC system proved not to be a simple task. Implementation of activity-based costing is regarded to be technically complex and it requires adequate human and financial resources. Research carried out by Innes and Mitchell (2000) proved that great amount of labour input needed for activity-based costing implementation is a significant factor on the stage of decision-making about implementation, but it is additionally one of the five key problems raised by companies in which activity-based costing functions (remaining problems are: difficulties in collecting data about resource and activity drivers, necessity to treat costs in the cross-section of processes going through numerous internal organizational units, other priorities and great amount of labour from financial section). Numerous research on activity-based costing proved that information generated in companies by the system is used in decision-making processes in such areas as pricing, activity-based budgeting, product and service development, customer profitability analysis and cost modelling. Research on activity-based costing diffusion in different countries (e.g. Ask, Ax, 1992; Lukka, Granlund, 1996; Cinquini *et al.*, 1999; Innes, Mitchell, 2000; Bescos *et al.*, 2002; Pierce, 2004) enables to formulate a statement that the percentage of companies which use ABC varies, however, in most of the research it is between zero and more than 20% (it should be noted that majority of the research studied medium-sized and large companies). The differences between countries in the percentage of companies using activity-based costing stems from the difference in the development of management accounting methods in those countries, the way the research sample was selected (large and small companies, production and non-production companies, financial institutions etc.) but most of all from the time of collecting information (in general, earlier studies show significantly lower percentage of companies using ABC).

Due to historical conditions, the development of management accounting in Poland was less intense and delayed in comparison to the theory and practice in highly-developed countries¹, this trend is also noticeable in the case of activity-based costing implementation. Polish companies mainly use different traditional systems of cost accounting, whereas modern systems, including ABC, are used sporadically. Diffusion of ABC in Poland is lesser than in the United States, Great Britain or in other highly-developed countries, and despite the fact that the gap is closing, it still remains significant. The first study which proved that ABC is present in the practice of Polish companies was carried out by Sobańska and Wnuk (2000a). Studies conducted by other authors revealed single cases of activity-based costing or its elements use (Jarugowa, Skowroński, 1994; Szychta, 2001,

¹ Modern concepts of management accounting were known in Poland among academics, and what is more, there were cases of their practical use. However their use in theory and in practice was significantly lesser than in the western countries (see: Jarugowa, Skowroński, 1994; Sobańska, Szychta, 1995, 1996; Sobańska, Wnuk, 1999a).

2002; Karmańska, 2003; Januszewski, Gierusz, 2004; Januszewski, 2005d; Wnuk-Pel, 2006a; Szychta, 2006a, 2007a), sometimes they signalized that researched companies were implementing or were considering implementation of ABC (Dyhdalewicz, 2000, 2001; Szychta, 2001, 2002; Karmańska, 2003; Januszewski, Gierusz, 2004; Januszewski, 2005d; Szychta, 2006a, 2007a). Some of the hitherto studies did not notice any single company which used activity-based costing or was considering its implementation. Yet, it should be stressed that such findings came mainly from earlier studies (Kinast, 1993; Sobańska, Szychta, 1995, 1996; Gierusz *et al.*, 1996; Radek, Schwarz, 2000; Szadziewska, 2002, 2003).

A more detailed research on the use of activity-based costing in Polish practice was carried out by Karmańska (2003), Januszewski and Gierusz (2004), Januszewski (2005d) and by the author of this work (Wnuk-Pel, 2006b). The studies analyzed such issues as knowledge of ABC, benefits ensuing from ABC implementation, problems connected with the process of implementation anticipated by companies considering implementation and companies which quit implementation and problems that occurred during implementation.

In Poland, research on activity-based costing implementation in the form of case study are becoming more frequent (including action research). The pioneer case studies carried out by means of surveys and interviews were conducted in 2000 (Wnuk, 2000; Kujawski, Ossowski, 2000) and the first action research was conducted in 2001 (Świdarska, Pielaszek, 2001). In the course of time, the number of such research grew, they especially intensified from 2004 when the number of companies using or implementing or considering implementation of activity-based costing systematically increased. Empirical research provided valuable information on the practice of activity-based costing in Polish companies. The research dealt with various problems and they mainly embraced the issues of activity-based costing implementation and the use of information generated by the system.

As far as activity-based costing is concerned, so far questionnaire research examining both the degree of diffusion as well as the usage of ABC in Polish companies have been carried out. Case study method (including surveys and interviews and action research), which is also used in Poland, enables a more detailed analysis of the problem. Bearing in mind all the research, it can be concluded that the number of companies using or implementing ABC or considering its implementation in the future is still growing.

Hitherto research on activity-based costing in Poland was considerably limited; it mainly came down to a statement whether the analyzed companies implemented/are implementing ABC in full/classic form or whether they only use certain elements of ABC. So far, there have been no wide-spectrum research on functioning of activity-based costing in Polish companies (apart from a few case studies) nor detailed research on the attitude of companies to activity-based costing and factors influencing the attitudes. Additionally, there were no research on

activity-based costing implementation success nor analysis of development of literature about ABC/ABM in Poland. The author's preoccupation with the issue of activity-based costing functioning in Polish companies mainly stems from the following:

1) despite the fact that activity-based costing is a concept which has been known and used in companies since the late eighties of the 20th century, it is not widely spread and therefore it is still perceived as innovation. Presentation of the concept's development may seem interesting;

2) one of the most interesting issues connected with the degree of activity-based costing diffusion in Poland, which has not been discussed in previous research, is the analysis of ABC/ABM literature development, in particular analysis of such issues as volume, authorship, research method, focus, and content of the publications;

3) so far, questionnaire research which studied diffusion of activity-based costing in Poland, has not presented in detail the notion of a problem and what companies considering implementation of ABC understand by a problem. It seems that sometimes companies use the term ABC inadequately i.e. they use the term in a situation when a new and better cost accounting system is implemented which has many cost centres and a bigger, than previously, number of cost drivers. In such case, only thorough analysis may help to conclude what ABC really stands for, whether it is the real activity-based costing or maybe just its elements or whether it is a developed form of traditional cost accounting;

4) another issue, which has not been studied in Poland in a more detailed form, is the attitude of Polish companies towards activity-based costing and identification of factors which positively influence implementation of ABC, as well as reasons underlying quitting implementation or reasons behind not considering ABC implementation;

5) apart from sporadic case studies (including action research) so far there have been no research which would look into the way ABC is implemented, especially the issue of initiative behind implementation or responsibility for implementation and occurrence of problems during implementation process;

6) ABC systems which function in Polish practice have different structure than ABC systems in foreign companies. Therefore, it may seem interesting to analyze the functioning of activity-based costing systems in terms of e.g. their size (e.g. number of objects, activities, resources, drivers) or information structures which function in the companies (e.g. division of costs into fixed and variable, identification of costs of unused capacity, identification of value-added and non-value added activities);

7) information obtained from activity-based costing may be and is used in companies in many different ways. Numerous people use it in many different decision-making processes – therefore, it seems interesting to determine the main addressee of this information and in what decision-making processes it is mainly used;

8) another yet interesting aspect of activity-based costing diffusion in Polish companies is the attempt to evaluate implementation success and benefits ensuing from the process, particularly analysis of the quality of ABC information, its usefulness and its influence on the company.

In the light of presented facts, fulfilling the previously identified research gap i.e. analysis of extent and way of use of activity-based costing in Polish companies seems important.

The main objective of this work is analysis of development and diffusion of activity-based costing, as well as evaluation of extent and way of activity-based costing use in Polish companies. Attaining the main objective will be possible by achieving the following partial objectives:

1) presentation of activity-based costing concept development as point of reference for further and detailed research into functioning of activity-based costing systems in Polish companies;

2) analysis of ABC/ABM literature in Polish journals in the dimension of: volume, authorship, research method, focus, and content of publications;

3) analysis of ABC implementation extent in Polish companies at the beginning of the 21st century in the light of ABC diffusion in the world;

4) presentation of factors conditioning the attitude of Polish companies towards activity-based costing (companies which implemented ABC, those which consider its implementation in the future and companies which do not consider implementation or quit the process after cost and benefit analysis);

5) examination of activity-based costing implementation process in Polish companies, examination of ABC systems structure and way the information generated by the systems is used;

6) analysis of the satisfaction and benefits ensuing from ABC implementation in Polish companies, particularly analysis of the attitudes of preparers and users of ABC information, and also the quality of ABC information, its usefulness and its influence on the company.

In order to attain the main objective of this work as well as its partial objectives, it has been attempted to prove the main thesis and the following specific theses. The main research thesis sounds: diffusion of activity-based costing in Polish companies, although delayed in comparison to highly-developed countries' practice, is conditioned by the same factors and develops in the same direction as in those countries.

In order to prove the main thesis and, additionally, to prove specific theses as well as to verify specific hypotheses, the following research methods have been applied: literature study, surveys, case study (including action research).

1. In terms of literature study, both Polish literature and foreign publications have been analyzed. Such extensive literature studies enabled the author to formulate own findings and to compare the findings with other research carried

out in Poland and other countries. On the basis of literature study, it has been attempted to prove the following specific theses of the work:

a) the concept of activity-based costing, since its emergence in the late eighties of the 20th century, has evolved from the measurement system of resource costs, activity costs and cost of products into the activity-based management system;

b) the development of ABC/M literature in Poland is considerably delayed (by 6–8 years) in comparison to the publications from the United States, Great Britain and other highly-developed countries;

c) there are more publications on the ABC/M concept in the journals for practitioners than in the university publications, and the authors of those publications are mainly university researchers;

d) the percentage of the ABC/M enthusiasts among consultants is close to the highest possible level, yet the ratio among practitioners and university researchers is only slightly lower;

e) among research methods used in the publications, it is more common to encounter descriptive works, surveys and case studies than literature reviews and analytical papers;

f) the subject area of the publications evolved from the activity-based costing in production companies and only in the main area of activity, into ABM in production and service companies in the main and supporting processes with reference to other concepts and tools of management accounting.

2. In order to attain the main objective of this work, three surveys have been carried out. The first survey (survey A) examined the attitude of Polish companies towards the notion of activity-based costing. The surveys were distributed among representatives of 1267 companies; 495 correct surveys were sent back which constitutes 39.1%. The second survey (survey B) analyzed the way activity-based costing operated in Polish companies. In general, 71 companies which used this type of cost accounting system have been identified; 33 correct surveys were sent back which constitutes 46.48%. The third survey (survey C) examined satisfaction and benefits ensuing from activity-based costing implementation. This survey was carried out among 28 respondents from 7 companies where activity-based costing was used. On the basis of conducted surveys, the following specific hypotheses have been verified:

a) companies operating in Poland mostly use traditional systems of cost accounting; modern systems such as target costing or activity-based costing are used sporadically and their diffusion is significantly lesser than in Western countries;

b) implementation of activity-based costing is influenced by various factors; the most important are: headquarters' demand (e.g. parent company), rise of competition and the drive to expand into new sales markets, dissatisfaction with the previous cost accounting, change of organizational structure or strategy, implementation of new technologies, desire to reduce costs and improve results, change-oriented attitude of employees, accessibility of financial and human resources;

c) among the most important problems related to the process of activity-based costing, which companies are afraid of, one could mention: lack of management support, high implementation and maintenance costs, significant labour input during ABC implementation and maintenance, other priorities, insufficient knowledge of ABC, difficulties with system structuring, lack of adequate resources;

d) lack of interest in implementation of activity-based costing or resignation from ABC implementation are conditioned by: satisfaction with current cost accounting system, low indirect costs, lack of management support, high costs of ABC implementation and maintenance, high labour input during ABC implementation and maintenance, other priorities, insufficient knowledge of ABC among employees, difficulties with system modelling, lack of adequate IT resources;

e) the most important factors which positively influence ABC implementation are: high direct costs, high competition, foreign capital share in the company and size of the company;

f) the structure of activity-based costing systems which function in Polish companies is consistent with the structure of systems functioning in foreign companies;

g) in companies, which implemented activity-based costing, information obtained from the system is used in different ways by particular departments and it enables making various decisions;

h) companies, in which activity-based costing operates, simultaneously use other modern methods of management;

i) managers and employees are positively oriented towards ABC implementation;

j) managers and employees rank the information from ABC higher than from the traditional cost accounting system;

k) managers and employees evaluate positively the usefulness of the ABC information;

l) managers and employees are convinced that ABC implementation influenced their company in a positive way;

m) opinions of preparers and users of ABC information on implementation benefits will differ considerably.

3. Research in the form of case study (including action research) aimed to verify the same hypotheses, which were verified by means of survey B, however the case study research, in comparison to the questionnaire research, was extended and more detailed. Another reason underlying the application of this type of research method was the analysis and explanation of methodological and organizational changes which occurred after activity-based costing implementation in the analyzed companies. Representatives of three companies, to which case study method by means of surveys and interviews was applied, were asked to fill in

surveys A and B. Subsequently, numerous direct interviews with employees and managers were conducted. Then the author analyzed gathered information and that enabled him to gain in-depth knowledge about conditioning of design and implementation of activity-based costing in Polish companies. By action research the author means his participation in the design, implementation and evaluation of activity-based costing in a production and trading company. This kind of research enabled (in comparison to case study by means of surveys and interviews) a more detailed analysis of activity-based costing operation in the company: (a) the author cooperated for a few months with company's employees at the stage of implementation, and later he also cooperated at the stage of ABC evaluation, (b) the author co-developed the ABC system, therefore he had unlimited access to the system's documentation, (c) the author had access to all information generated by the cost accounting system and he could observe how the information was used by the company's management. Based on the case study, the following specific hypotheses have been verified:

c) the process of activity-based costing implementation is positively influenced by three groups of factors: motivators, catalysts and facilitators; during the implementation process, the factors work jointly and they promote the process of change;

d) among obstructors, factors which negatively influence activity-based costing implementation, one should mention: attitude not favouring changes, substantial labour input needed for implementation and insufficient knowledge of activity-based costing;

e) implementation of activity-based costing in the companies caused many methodological changes, especially improvement in accuracy of calculating indirect costs and improvement in accuracy of profitability analyzes;

f) implementation of activity-based costing triggered institutional/organizational changes in the company, especially nearing the function of management accounting to operational functions and improvement in the significance of information from the management accounting and its more frequent use especially in the decision-making process.

4. Additionally, apart from the above research methods, a comparative analysis of the author's own research in the form of surveys and case studies (including action research) with similar research conducted both in Poland and in the world has been carried out.

It needs to be highlighted that the author is aware of the fact that the findings of empirical research should be interpreted with great caution. Particularly, due to sample choice, they cannot be treated as research on activity-based costing in all the companies operating in Poland. Although in the questionnaire research, the sample was large, it was not representative; in case studies, the choice of companies was deliberate. According to the author, these limitations were partially

reduced due to triangulation of various research methods and comparison of own findings with research conducted by other authors.

This work is an outcome of a-few-years long literature studies and empirical research carried out by means of questionnaires and case studies. It is also a product of author's own cogitation resulting from cooperation with professor Alicja Jaruga, who was author's doctoral thesis supervisor, and cooperation with professor Irena Sobańska, with whom the author collaborates both on professional and academic level – therefore I would like to thank Them and express my great gratitude for Their support. Moreover, I would like to thank my all Colleagues from the Accounting Department of Łódź University and hundreds of respondents, who participated in the research.

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