
Use of Management Audit by Small and Medium-Sized Enterprises in Business/Managerial Practice

Submitted 10/03/19, 1st revision 25/03/19, accepted 17/04/19

Romana Píchová¹, Daniel Raušer²

Abstract

Purpose: The paper's primary objective is to emphasize and remind mainly small and medium-sized enterprise owners and managers of the magnitude of bringing the frequently neglected management audit into practice as an essential aid to broad assessment of the management systems.

Design/Methodology/Approach: In order to review a management system used within an enterprise or in business practice in the present conditions, one may come across a variety of procedures and/or steps that may be followed. However, the majority of them appear to be specifically oriented, and particular factors influencing both the efficiency and quality of that system are subsequently assessed rather individually than completely.

Findings: Management audit, which may be regarded as a unique tool for comprehensive evaluations of the currently used enterprise management systems affects the factors for an effective managerial practice on a large-scale level.

Practical Implications: To introduce practical applications of the authors' formerly published principles of systemic approach to management audit implementation and their developed concepts of audited areas, including given sectors.

Originality/Value: The main effort of company owners and/or managers should consist in increasing the internal stability of their businesses on the basis of efficient and high-quality management as means of contributing to long-term success in the market.

Keywords: Small and Medium-sized Enterprises (SME), management audit, systemic approach, audited areas

JEL codes: M42, M21, M14.

¹The Institute of Technology and Business in České Budějovice, the Czech Republic, e-mail: pichova@mail.vstecb.cz

²The Institute of Technology and Business in České Budějovice, the Czech Republic.

1. Introduction

Regular implementations of management audit and subsequent assessments of identified weaknesses can provide enterprises with internal stability that is particularly based on effective management as the key for long-term sustainability. At present, however, very few enterprises are aware of such audit, let alone perform it. In addition, enterprises, or their managers, frequently mistake both the importance and purpose of management audit for personnel audit. The authors therefore wish to present enterprises (and the general public) not only with theoretical significance and essence of management audit, but mainly principles of its use in practice, as included in two previously published models, i.e. "Management Model of Decision Making" and "Model of Systemic Approach to Management Audit".

2. Literature Review

2.1 Definition of the Concept of Management Audit

Although the concept of management audit has been defined by a number of Czech and foreign authors specifying its purpose, objective and content, it is occasionally confused with personnel audit. The most common definitions are given in Table 1 below:

Table 1: *Overview of definitions of management audit*

Author	Definition of management audit
David (2011)	Gathering and evaluating of information obtained on management activities of a given enterprise.
Kotler, Keller (2016)	Comprehensive, systematic, independent and objective verification of management environment, goals, strategies and activities of an enterprise in order to identify problematic areas or actualities, recommend and propose a plan of particular steps that would improve performance of enterprise management.
Law (2009)	An independent review of enterprise management conducted by specialist management consultants specializing solely in this type of review. It covers all areas associated with organizational management, including production control, marketing, management, sales, finance, personnel activities, etc.
Moeller (2016)	An independent professional activity whose aim is to evaluate the currently used enterprise management system.
Truneček (2004)	An independent, objective, assurance and consulting activity which is aimed at improving enterprise management and which helps the enterprise achieve its goals by introducing a systematic and methodical approach in order to assess and improve effectiveness of management and support related processes.
Wheelen, Hunger (2012)	It is one of the ways of performing an analysis of enterprise

	management, when the audit comprises compiling a list of questions from different areas of management (as well as areas that influence management) and for which finding objective and truthful answers is required.
--	--

Source: Compiled by the authors

2.2 Management Audit Specifications

Following from the above definitions as well as those made by several other authors concerned with management and auditing, e.g. Russell (2007), Cascarino (2015), Nicholas (2014), it may be argued that management audit includes certain characteristics, which are as follows:

- independence – management audit must be carried out, processed and evaluated by an unbiased auditor;
- objectivity – implementation, processing and evaluation of management audit must be factual and impartial;
- comprehensiveness – management audit is to cover main management activities of an enterprise and its processes;
- expertise – it is to be applied to both the activity standpoint (when all management audit activities must be appropriately prepared in advance, managed, checked and documented) and the auditor's perspective as management audit must be conducted by a competent and qualified person;
- systematicity – most importantly, management audit is an organized assessment of management activities of an enterprise, and identifies the most urgent needs to improve efficiency of enterprise management.

Apart from that, management audit also offers a number of distinctive services:

- consulting – to discuss suitability of the currently used management system within an enterprise with its managers and management team;
- advisory - to recommend and suggest (to managers and management team of the enterprise) adopting measures that guarantee its effective management;
- validation – to determine whether the enterprise achieves its set goals, appropriately utilizes enterprise resources, sufficiently adapts to its surroundings (and responds to changes in a timely manner), has a well-formulated strategy, and uses an appropriate organizational structure;
- evaluation – to classify the currently used management system within the enterprise and evaluate its suitability;
- assurance – to assure managers and management team of the enterprise of their right decision(s) on how to manage the enterprise or, if appropriate, to point out their incorrect decisions;
- detection – to detect ineffectively performed management activities (and/or possibly ineffective management functions in the enterprise);

- information – to pass on obtained information and resulting evaluations to managers and management team of the enterprise.

According to Spencer (2004), the following principles are also typically applied to management audit:

- considering future-oriented rather than past-oriented solutions;
- focusing on enterprise goals, strategy and the currently used style of enterprise management;
- assessing suitability of the enterprise's organizational structure;
- analyzing individual management functions, i.e. the state of fulfilling requirements placed on management team of the enterprise;
- using, in particular, consulting and advisory approach in order to propose necessary changes in a variety of enterprise processes for more effective management.

2.3 Essence/Importance and Objective of Management Audit

Vallabhaneni (2016), Barry and Chau, (2010) and Truneček (2004) all state that the essence of management audit is to provide leaders of an enterprise with information about the quality, style, manner and effectiveness of enterprise management. The objective of management audit is to assess the current state of enterprise management system, which is to identify and describe a problem area within the enterprise that prevents it from its effective managing, and to help managers meet enterprise goals (operational, tactical, and strategic). Thus, management audit provides specific services, such as analysis and assessment of the current state of management, recommendations and proposals for its improving as well as selections of appropriate measures to achieve established enterprise goals (Hirdinis, 2019).

3. Methodology

Firstly, the underlying objective of this paper is to present enterprises (and their managers), professional auditors and the general public with some essential information on using management audit. Furthermore, included is a developed methodology concept of how to proceed during management audit implementation and what areas to analyse, with the attention being drawn to small and medium-sized enterprises in the Czech Republic. Then, the partial objective is to evaluate whether, on performing management audit, it is appropriate to analyse several areas at the same time or to focus only on the area of management, and whether the number of analysed areas depends on the size of a particular enterprise.

Based on Molnár *et al.* (2012), the method of experimental modelling was selected to fulfil the main research objective, one research question and one hypothesis were established to meet the other (partial) objective. The research question was related to

an assumption whether, in terms of management audit, enterprise managers analyse only the area of management or they take this opportunity to analyse other areas affecting management. Thus, the question was formulated in the following wording:

Do managers analyse multiple areas during management audit implementation?

Then, the hypothesis was linked to a notion whether the number of analysed areas in management audit depends on the size of the enterprise, eventually standing as follows:

The number of audited areas depends on the size of a respective enterprise.

According to recommendations by Walker (2010) and Hindls (2007), evaluation of the research question was carried out by a binomial test.

Figure 1: Principle of binomial test calculation

absolute expression $f1 = 1 - f0 \approx f1 > f; f1 < f; f1 = f$
relative expression $f1 = 100 - f0 \approx f1 > f; f1 < f; f1 = f$
$(f1 + f0 = 1; 1 - f1 = f0)$

Source: Compiled by the authors

According to other recommendations by Walker (2010) and Hindls (2007), the hypothesis was evaluated using correlation analysis.

Figure 2: Principle of correlation coefficient calculation

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}}$$

Source: Compiled by the authors

Particular data for developing the considered methodology and evaluating the research question and hypothesis were gathered from a questionnaire survey and structured interviews. The survey was directed to Czech enterprises classified in the SME category, or managers who themselves carry out management audit in these enterprises. Through uniform stratified selection, a total of 750 enterprises were contacted (i.e. 250 enterprises from each category type – micro, small and medium-sized enterprises). The return of questionnaires was 83%, being a sample of 610 enterprises in total. Such a high rate of questionnaire returns was ensured due to their direct personal handover and electronic distribution, which allowed to reach enterprises across the Czech Republic. Of the total number of respondents, however, only 67 (1 micro-enterprise, 33 small enterprises, 33 medium-sized enterprises)

perform management audit in its true nature. The authors therefore proceeded to work with the sample of $n = 67$ as the category of small and medium-sized enterprises.

Structured interviews were used as a complementary method for obtaining information on management audit implementation from professionally qualified auditors engaged in this issue. On the grounds of intentional selection, a total of 20 potential respondents were approached, of whom 16 pledged possible cooperation that was eventually commenced only with 12 professional auditors.

4. Results and Discussion

4.1 Concept of Methodology for Management Audit Implementation

In their previous publications Píchová and Raušer (2017a) and (2017b) have introduced their own proposals on how to treat management audit as efficiently as possible, which is what some managers have unfortunately been lacking. The authors' concept of management audit implementation has been demonstrated by a specific model, titled as "*Management Model of Decision-Making*", comprising from three separate sub-models that do not follow one another. The main purpose of the first and the second sub-model, i.e., "*7S Adaptation Model*" and "*Application IFE 7S Matrix*", is a detailed assessment of the current enterprise management system, where managers should focus on selecting an appropriate management style, thereby effective management of the given enterprise as a whole.

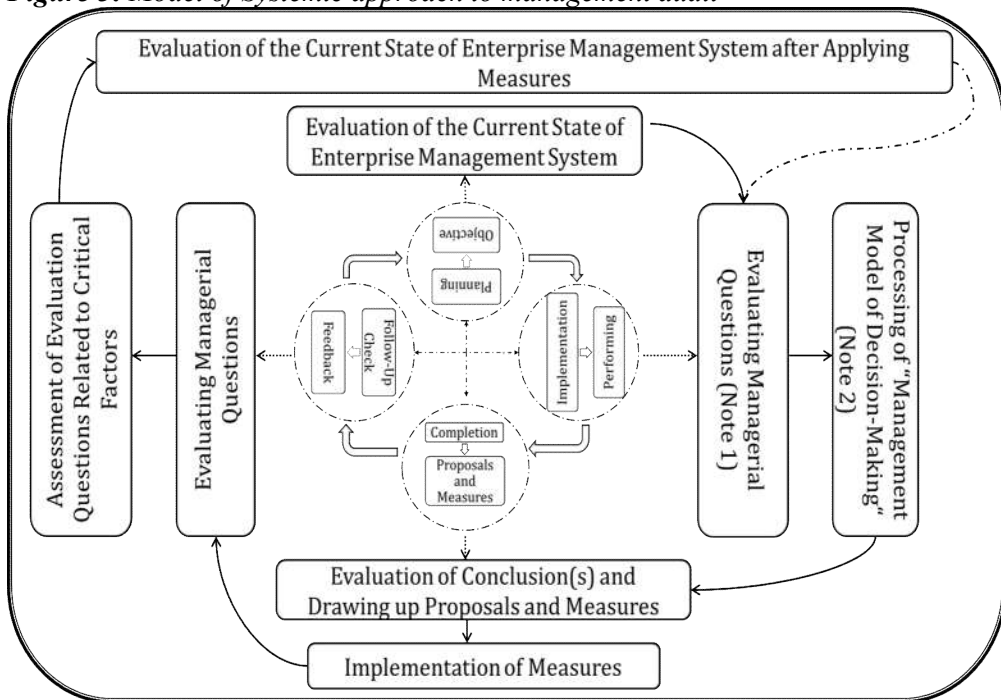
The third sub-model, "*Resource Model*", is to evaluate and analyse the currently used enterprise resources as a unique set of inputs, where managers should focus on their adequate allocation. To further add to this and to facilitate management audit and its processing, the authors have also come up with their own design of using an appropriate systemic approach as well as a standardized and purposeful process depicted in the model of "*Systemic Approach to Management Audit*", as shown in Figure 3 for more detailed information, see Píchová, Raušer (2018).

The aforementioned model of "*Systemic Approach to Management Audit*" was developed with regards to PDCA cycle principles, interviews with audit practitioners and their recommendations, and certain observations made by Moeller (2016), eventually taking the form of repeated performing of four elementary phases and related key management audit activities:

- P: Plan – planning of activities, i.e. planning management audit implementation, which also includes defining audit objective(s);
- D: Do – putting the plan into practice, i.e. management audit implementation, which is to evaluate the current enterprise management system by responding to "Managerial questions" and processing the "Management Model of Decision Making", see Píchová, Raušer (2017b);

- C: Check – checking the result, i.e. comparing the current and desired state of enterprise management system, and proposing measures (preferably 3 to 5) leading to improvement of the system;
- A: Act – implementation of improvements, i.e. implementation of the proposed measures leading to a more effective enterprise management system followed by re-evaluation of the current state of the system based on assessing "Managerial questions" as well as questions from the "Management style" factor included in the "7S Adaptation Model".

Figure 3: Model of Systemic approach to management audit



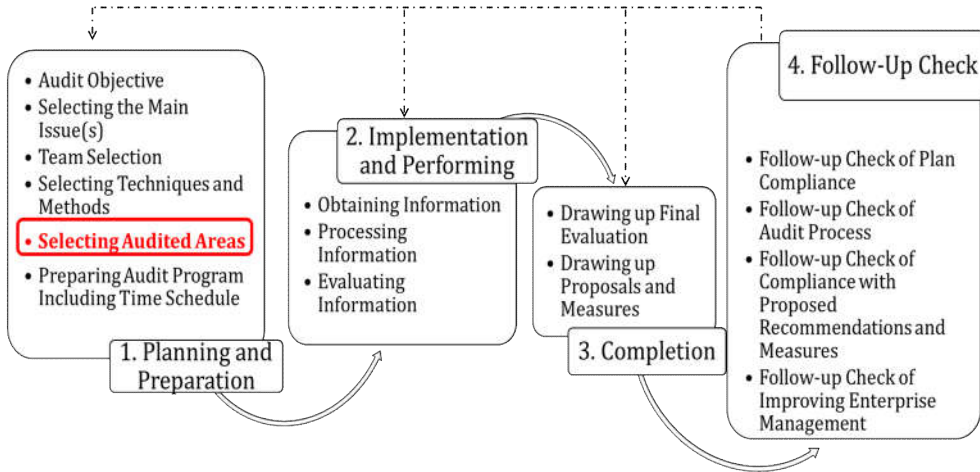
Source: Píchová, Raušer (2018)

Additionally, it may be stated that the "Systemic Approach to Management Audit" model comes from the idea of conducting management audit in a specified order and time sequence, as illustrated in Figure 4. It should also be noted that the model (and its using) had not yet been previously developed, with managers having been lacking it either.

Moreover, the entire process has been further enhanced with a specific model of "Six Area Auditing (6A Auditing)", through which one is to determine what areas would be appropriate for auditing, as revealed by the research survey. There are two significant conditions connected with the model, the first pointing to the fact that (in terms of management audit) enterprises tend to audit multiple areas (not merely the

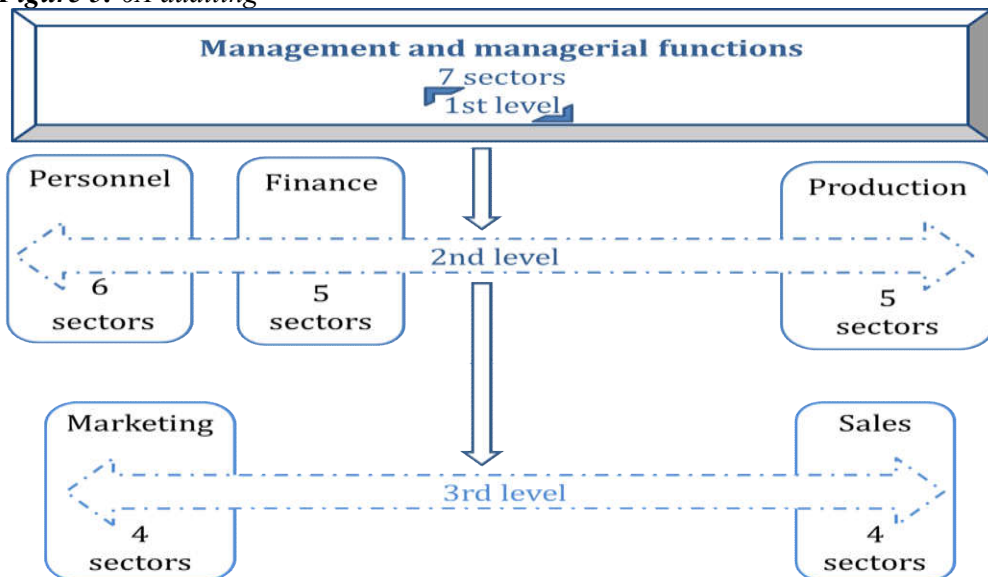
area of management) and the other pointing to the fact that selecting a certain number of audited areas is influenced by the size of a given enterprise. On the whole, the model therefore takes account of both conditions and corresponds to specific requirements of SME managers.

Figure 4: Advised activities during management audit



Source: Compiled by the authors.

Figure 5: 6A auditing



Source: Compiled by the authors

As may be gathered from the above figure, the proposed model contains 3 levels, where the first level is considered to be the primary one and serves to make a thorough evaluation of management area, being the priority of management audit. Stemming from the original "7S Adaptation Model", 7 sectors (Table 2) have been assigned to the area of "Management and managerial functions", which results in both of the models being interconnected and supplementing each other (it also being the authors' intention). Then, the 2nd level (i.e. areas of Personnel, Finance and Production) and 3rd level (i.e. areas of Marketing and Sales) ought to be considered as additional elements of management audit, where attention has only been drawn to areas most frequently affecting management of the given enterprise as a whole (whether a small one or a medium-sized one). Apart from the primary level (1st level), small enterprises (11-50 employees) are recommended to have the 2nd level areas audited as well, whereas medium-sized enterprises (51-250 employees) are advised to audit a total of 6 areas, i.e. all 3 levels. In order to facilitate audit processing more specifically, numbers and particular names of sectors (see Table 2) have been added to each area where their individual and detailed analysis is to be carried out, since they primarily affect the given area and thereby managing the enterprise as a whole.

Table 2: Sectors of audited areas

Area	Number of sectors	Sectors
Management	7	Structure
		Systems
		Management Style
		Staff
		Skills
		Strategy
		Shared values
Personnel	6	Work environment
		Employee qualifications
		Employee performance ratings
		Motivation and stimulation of employees
		Completed tasks
		Workplace safety
Finance	5	Attitude to funding
		Funding principle
		Financial reporting
		Financial stability and profit
		Investing activities
Production	5	Production practices
		Continuity of production process
		Production technologies
		Products
		Product range
Marketing	4	4P (Product, Price, Place, Promotion)
		Direct marketing

		4C (Customer solution, Cost, Convenience, Communication)
		Customers
Sales	4	Specification
		Services
		Logistics and expediting
		Sales

Source: *Compiled by the authors*

4.2 Evaluation of the Research Question

The aforementioned question was evaluated in three stages. The first stage consisted in determining categories for assigning categorical numerical values. In the second stage, 0 and 1 were assigned (as the numerical values) according to the specified categories, as stated in Table 3. The third stage included a numerical evaluation of the binomial test and a conclusion. All in all, the actual evaluation followed form defining a desired frequency value. Given the research question formulation, the desired frequency (f) was selected at $f = 0,5$ in the absolute expression value, which corresponds to $f = 50\%$ in the alternative for the relative expression value. A positive evaluation of the research question may be found if the resulting value (f1) is higher than f (see Figure 1), i.e. $f1 > f 0,5 (50\%)$, whilst a negative evaluation may be found if f1 is less than or possibly equals to f, i.e. $f1 \leq f 0,5 (50\%)$.

Table 3: *Principle of assigning categorical numerical values*

Category – Analysis of Areas		
Analyzing only the area of management	Analyzing multiple areas	
Categorical Numerical Values – Code Assignment		
Category	Analyzing only the area of management	Analyzing multiple areas
Code	0	1

Source: *Compiled by the authors*

Next, the binomial test evaluation is given in the following Table 4:

Table 4: *Evaluation of binomial test*

Categorical Numerical Value		N	Evaluation	Frequency
Analysis of the area of management	0	9	$1 - f_0 > 0,5$	$f_0 = 0,13$
Analysis of multiple areas	1	58		$f_1 = 0,87$
Total		67	$1 - 0,13 = 0,87$	$f_{\Sigma} = 1,00$

On the grounds of the calculated binomial test value, the research question can be answered positively – YES (managers analyze multiple areas at the same time during management audit implementation), since the frequency value ($f_1 = 0,870$) is higher than $f = 0.5$.

4.3 Evaluation of the Research Hypothesis

The hypothesis was evaluated in two stages. The first stage resided in determining and assigning certain evaluation variables (as shown in Table 5) to be used while processing obtained qualitative data in an adequate statistical program.

Table 5: Principle of determining evaluation variables

System of assigning evaluation variables – according to the number of analyzed areas	Evaluation variables
12 areas (i.e. all areas within an enterprise)	1
10 - 11 areas	0,85
8 - 9 areas	0,7
6 - 7 areas	0,55
4 - 5 areas	0,4
2 - 3 areas	0,25
1 area - only the area of management	0,1

Source: Compiled by the authors.

The second stage involved the actual hypothesis evaluation based on the correlation analysis. Confirming, or refuting, of the hypothesis was resolved by comparing a resulting p-value with a significance level (α) at 5%. The data were processed in the "R" statistical program. The resulting Pearson correlation coefficient (r) value as well as the p-value are shown in the following Table 6:

Table 6: Evaluation of correlation coefficient and p-value

Pearson correlation coefficient (r) interval $< -1; 1 >$	p-value $\alpha = 5 \%$; (p-value $\leq 0,05$)
r = -0.2363682	p-value = 0.05604

Source: Calculated by the authors.

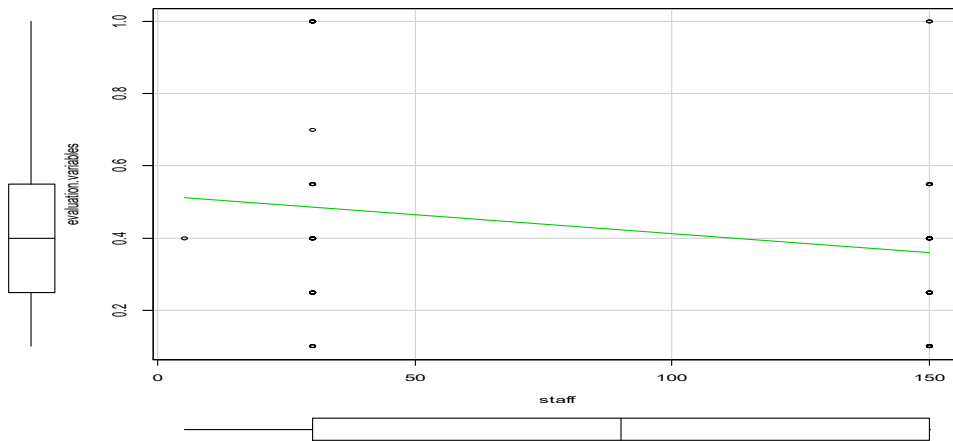
The above values imply that the number and selection of audited areas in relation to management audit depend only partially on the size of an enterprise. The r value indicates weak dependence between the variables. Additionally, the correlation coefficient revealed indirect dependence, which points to the fact that the number of audited areas on implementing management audit decreases with an increasing number of employees. This is clearly illustrated in Figure 6 below.

As may be seen, the p-value is almost at the significance level of 0.05 and the hypothesis cannot therefore be refuted.

5. Conclusion

Considering the definitions of management audit, its essence and objective given in the introductory literature review, it may be stated that management audit is derived from the word "management", the basis of which is to evaluate and analyze the currently used management system in an enterprise.

Figure 6: Graphical evaluation of correlation analysis



Source: Compiled by the authors

However, the derivation does not come from the word "manager", where the aim is to evaluate and analyze characteristics, skills or abilities of managers being currently present at an enterprise, which represents the implementation of personnel audit.

In addition to the previously mentioned notion, particular models were developed and introduced to managers and the general public in order to demonstrate the true meaning, nature and purpose of management audit. Specifically, the "Management Model of Decision-Making" was designed not only with respect to requirements recognized by the authors, but also (and most importantly) specific requirements of managers and potential users, eventually having these features:

- Definability – the model has a clearly formulated (definable) goal, i.e. to evaluate the current state of an enterprise management system. If the model is to be used for other purposes, applying its procedures may not be sufficient or suitable.
- Adequacy – the model contains all essential features of an enterprise management system and is based on both the theoretical knowledge and the current practice of managing an enterprise.
- Flexibility and adaptability – the model is flexible enough and adaptable to specific uses and ideas of individuals or enterprises. Each stage of the model, i.e. sub-model, encompasses standardized elements that can be modified or added to suit specific needs of potential user(s).
- Interpretability – the model is fully understandable to all its potential users.

Also, the "Systemic Approach to Management Audit" and "6A Auditing" models, with the latter being possible to consider as part of the former, were compiled in

connection with specified requirements of authors, managers and potential users. They are as follows:

- Definability – again, the model has a clearly formulated goal, i.e. to use a systemic approach as well as a standardized and purposeful procedure while conducting management audit. If the model is to be used for other purposes, applying its procedures may not be sufficient or suitable either.
- Accuracy – the model was developed so that its individual stages are logically interlinked while using it. As well as that, the model is to be applied as a single unit and the individual stages cannot be skipped or mutually interchanged, since the model would lose its original purpose.
- Adequacy – even this model includes all the essential features of using a systemic approach in the context of management audit implementation together with the use of a standardized and purposeful audit procedure. In particular, the model is based on the current practice of audit experts.
- Interpretability – similarly to the previous one, this model is also fully understandable to all its potential users.

References:

- Barry, J.W. and Chau, V.S. 2010. *Strategic Management: Principles and Practice*. Hong Kong: Cengage Learning EMEA, ISBN 978-18-44809-93-6.
- Cascarino, R. 2015. *Internal Auditing: An Integrated Approach*, 3rd ed. Lansdowne: Juta & Company, ISBN 978-14-85110-59-0.
- David, F.R. 2011. *Strategic Management: Concepts and Cases*, 13th ed. New Jersey: Prentice Hall, ISBN 978-01-36120-98-8.
- Hirdinis, M. 2019. Capital Structure and Firm Size on Firm Value Moderated by Profitability. *International Journal of Economics & Business Administration*, 7(1), 174-191.
- Hindls, R. 2007. *Statistika pro ekonomy*. 8. vyd. Praha: Professional Publishing, ISBN 978-80-86946-43-6
- Kotler, P.T., Keller, K.L. 2016. *Marketing Management*, 15th ed. Boston: Pearson, ISBN 978-01-33856-46-0.
- Law, J. 2009. *A dictionary of business and management*, 5th ed. Oxford: Oxford University Press, ISBN 978-01-99234-89-9.
- Moeller, R.R. 2016. *Brink's modern internal auditing: a common body of knowledge*, 8th ed. Hoboken: John Wiley, ISBN 978-1-119-01698-4.
- Molnár, Z. 2012. *Pokročilé metody vědecké práce*. Praha: Profess Consulting, ISBN: 978-80-7259-064-3.
- Nicholas, A.W. 2014. *A Guide to Effective Internal Management System Audits*. Cambs: IT Governance Publishing, ISBN 978-1-84928-560-5.
- Píčová, R., Raušer, D. 2017a. *Management Audit as a Tool for Managing Small and Medium-Sized Enterprises*. In: *7th International Scientific Conference on Managerial Trends in the Development of Enterprises in Globalization Era (ICoM)*. City: Slovakia, Nitra, 186-195. Available at: https://spu.fem.uniag.sk/fem/ICoM_2017/files/international_scientific_conference_icom_2017.pdf.

- Píčov, R., Raušer, D. 2017b. Small and Medium-sized enterprises and their use of management audit as a tool for competitive advantage in the global environment. In: Globalizcia a jej socilno ekonomick dsledky. City: Slovakia, Rajeck Teplice, pages 1964-1971. Available at:
http://ke.uniza.sk/sites/default/files/content_files/part_iv_final_3.pdf.
- Píčov, R., Raušer, D. 2018. Principle of Using Systemic Approach to Management Audit Implementation by Small and Medium-Sized Enterprises. Scientific Papers of the University of Pardubice, Series D, Pardubice: University of Pardubice, vol. 26, n. 44, s. 209-220, ISSN 1211-555X.
- Russell, J.P. 2007. The Internal Auditing Pocket Guide: Preparing, Performing, Reporting and Follow-up, 2nd. ed. Milwaukee: Quality Press, 200 s. ISBN 978-08-73897-10-5.
- Spencer, P.K.H. 2004. Internal Auditor at Work. Hoboken: John Wiley.
- Truneek, J. 2004a. Intern manažersk audit. Praha: Professional Publishing, 148 s. ISBN 80-86419-58-4.
- Vallabhaneni, S.R. 2016. Internal Audit Basics - Focus Notes: Part 1. Hoboken: John Wiley, 285 s. ISBN 978-1-119-24193-5.
- Walker, I. 2010. Research Methods and Statistics: Palgrave Insights in Psychology Series, 1st ed. New York: Palgrave Macmillan, 200 s. ISBN 978-0-230-24988-2.
- Wheelen, T.L., Hunger, D.J. 2012. Strategic management and business policy: concepts and cases, 13th ed. Upper Saddle River: Prentice Hall ISBN 978-0-13-215322-5.