

# EURASIAN JOURNAL OF BUSINESS AND MANAGEMENT

[www.eurasianpublications.com](http://www.eurasianpublications.com)

---

## NEW TOOLS, METHODS, PROCEDURES IN CONTROL(-LING)

**Juraj Misun**

Corresponding Author: University of Economics in Bratislava, Slovak Republic  
Email: [juraj.misun@euba.sk](mailto:juraj.misun@euba.sk)

**Ivana Misunova Hudakova**

University of Economics in Bratislava, Slovak Republic  
Email: [ivana.misunova@euba.sk](mailto:ivana.misunova@euba.sk)

---

### Abstract

Controlling is a constantly ongoing managerial process of designing standards, measuring performance, comparing the performance with standards, and implementing corrective actions to ensure effective and efficient running of the organization's activities. It represents one of the basic functions in management in Anglo-American understanding. Its importance has significantly risen during the last economic crisis. Other managerial functions include planning, organizing and leadership as well as staffing, decision making, analyzing and implementing. This paper does not understand the concept of management accounting under the term controlling (German meaning). Based on results of our questionnaire survey in 331 companies operating in Slovakia, which collected data at the turn of 2016 and 2017, we analyze new tools, methods and procedures in controlling, which were introduced in companies operating in Slovak Republic over the prior year. We analyze the research results according to the different characteristics of our research sample, such as size of the company (no. of employees), economic result, respondent's position in the organizational structure of the company etc.

**Keywords:** Controlling, Organizational Control, Management

---

### 1. Introduction

Controlling has been one of the main management functions since the division of management in smaller parts. Formerly called control, it changed its name to controlling (Koontz and O'Donnell, 1955) to state that a manager has to perform this function almost permanently in his work. Unfortunately, it has to share this name with a German theory (e.g. Becker *et al.* 2011; Guenther, 2013; Osmanagic Bedenik and Lalovac, 2007) and this makes its existence a little bit complicated, mainly in continental and especially in Central and Eastern Europe. For this reason, we are temporarily forced to use the term control(-ling) to differentiate ourselves from German theory and draw attention to this fact.

Including control among one of the main management functions (Fayol, 1917) is more than a century old and highly respected (Reid, 1995; Fells, 2000). While it might seem it has lost a lot of its importance in the past decades, controlling is finding its place in the forefront again. Although self-control and empowerment (McKenna *et al.* 2010) made controlling look useless,

but new challenges in the society showed this management function is still here, when needed. Besides, "...thanks to the recent surge in 'bottom line' and 'shareholder value' thinking, controlling is back—with a vengeance" (Mintzberg, 2009, p. 57).

Controlling theory serves as a certain metatheory that combines the knowledge of different disciplines. Schwarz (2002) argues that foundations for management accounting and control systems are accounting (controllability), social sciences (social control) and cybernetic (control theory), which combine decision-making theory and new institutional economics. Ultimately, a very large part of the management accountant's work is focused on the professional support of the manager in his decision making (Hall, 2010), which is manifested in the control process. Great challenges of controlling are certainly automation and artificial intelligence that will make much of the control process (standard setting, performance measurement, benchmarking and performance comparison) easier. In the long run, however, the decision on corrective action will remain in the hands of the manager.

Our intention to study the issue on controlling is linked not only to the fact that the theory is stabilized, and therefore presents mainly in books (and less in scientific journals), but also in the fact that we are researching it in latitudes that have a special relation to control. In Slovakia and many other Eastern European countries, control has also a dark side of its history, due to the communistic regime. This can result to very specific views from managers who remember the use of control by the regime. In this context, we distinguished between the Eastern and Western approaches to control, where the Eastern approach is strongly focused on formal control, and the Western approach has increasingly inclined towards informal control and employee self-control over time. The Eastern and Western approaches have different types and forms of control, a different number of control process phases, or other meanings of such terms as internal and external control, subject and object of control (Misun and Misunova Hudakova, 2018).

Although, from a partial point of view, enough attention is paid to individual tools, methods or procedures, there is a lack of studies to summarize new knowledge in this field as well as combinations with other studies that focus on controlling.

## **2. Theoretical Background**

Generally, a method represents a way to achieve a predetermined goal through purposeful and planned action. Regarding controlling, we need to divide methods into two groups. The first group includes general methods of knowledge. With these methods, managers and other individuals and group responsible for exercising control gain information on the controlled phenomenon. The second group consists of tools, methods and procedures, which are designated directly for control purposes. Control techniques provide managers with the necessary type and amount of information they need to measure and monitor performance. Information from the various controls have to be tailored to the specific level of management, department, unit or activity. To ensure complete and consistent information, organizations often use standardized documents such as financial, status and project records. Each area within the organization, however, uses special control techniques (Benowitz, 2001).

### **2.1. General Methods of Knowledge**

These methods are used in controlling for clarification of the facts about the object and the matter of control. In their essence, they are identical to scientific methods of knowledge, but this does not mean that the control subject must be a scientist.

The general methods of knowledge in controlling include:

- analysis – ideational (abstract analysis) or real decomposition (analysis) of a particular object or phenomenon on its essential elements. It represents a general approach to economic activity and its deeper understanding. Basic types of analyses by hierarchical levels include classification, relationship, and causal analysis.
- economic analysis – a method of systemic recognition, measurement and generalization of the effects of individual partial factors on the economic activity and the

dynamics of its development. It is done through the processing of economic indicators obtained from individual sources of information using special methods.

- synthesis – ideational combination or assembly by prior analysis of the decomposed parts of the recognized object or phenomenon into the whole. It helps the subject to discover the internal patterns of operation and development of the controlled object or phenomenon.
- comparative method – the basic method used in controlling. We find it primarily in the third step (the four-phase) control process when comparing the set standard with the achieved performance. The essence of the method is to compare and detect differences between certain phenomena, objects, their states, sets of data, etc. Without the content and formal comparability of the data, the comparison cannot be performed. The comparison criterion can be determined by time, space, or matter-of-factly.
- economic comparison – it determines the level and dynamics of the object being controlled and the factors that affect this object. The primary task is to draw attention to the deviations of the phenomenon from the basis with which we compare it and to draw attention to the detailed analysis of the causes of the deviations. In the case of control, the basis is a standard, a plan or, for example, a legislative norm. In order to use the economic comparing method, the organization has to have a sufficient information base as well as methods for quantifying causal relationships, linkages, the influence of partial factors on aggregate indicators (e.g., statistical and mathematical methods).
- deduction – a process from general to special and individual, from whole to parts. First of all, there is a certain generalizing argument, which is illustrated by practical examples for argumentation. In controlling, it is sometimes the case that the controlling entity does not have the necessary information, whether due to their costly acquisition or, for example, the reluctance of the control object to provide that information. At this point, a sufficiently competent control subject can use the deduction and induction methods to supplement the missing information with some expert judgment.
- induction – it represents a process from individual to general, or from certain facts to generalizations. In gaining knowledge from the selected file, we need to be aware of the great risk of the method. It is a certain level of generalization, when we know the whole file from the knowledge of several facts of the basic file. It may be heavily dependent on the attitudes of the subject of control and, for example, in the case of antipathy to a particular worker, bad conclusions can be drawn.
- abstraction – it is based on the exclusion of features and relationships that substantially affect the matter of control. Features and relationships whose influence is not substantial are not taken into account. This can save an important resource for the subject, which is the time.
- historic-cognitive method - finds its application especially in the ability of the subject of control to assess the phenomena, to monitor their state, development and function in time and space and to be able to illustrate it in a mathematical or other logical way.
- statistical methods – consist of quantifying controlled objects. They represent one of the possibilities of their assessment in terms of the dynamics of the approaches to control in the form of statistical reports, graphs, etc. (Misun and Misunova Hudakova, 2017).

## 2.2. Tools, methods and procedures for control

Majtan *et al.* (2016) divide these techniques, methods and procedures into two groups: the traditional and the modern group. Financial accounting, statistical reports, operational records, economic activity analyses, analysis of the budget process and others are the basis for the use of the traditional group. An important tool of traditional methods is the budget. In addition, the author also includes audit or personal observations in the traditional group. The second group includes modern techniques, methods and control procedures, including operational research (e.g. linear programming, value engineering, network analysis, etc.). A very similar distinction comes from Tripathi and Reddy (2012), which distinguish old (financial or accounting-based techniques directed towards the control of money) and new control techniques (providing the

kind of information that are not readily available with the old techniques). Bhattacharyya (2008) includes into the methods of control: implementing of policies, job descriptions, quality control of materials, budgets, audits, standard cost analysis, employee performance evaluation, impact assessments, graphic charts and diagrams.

We compare this basic classification with other significant authors and extend it further. For example, DuBrin (2012) offers a breakdown of the controlling techniques according to the fact whether they are budget-based or not. The non-budgeting techniques are further distinguished between qualitative and quantitative control techniques. Qualitative control techniques are methods that are based on human judgment of performance, expressed verbally rather than numerically. Even a point scale, such as a scale from one to five, could be interpreted as a qualitative technique, because it is based primarily on human judgment. With qualitative control techniques, care must be taken to ensure that the competency and ethics of people who collect information for quality controls influence the effectiveness of these controls. These methods include external audit, internal audit, management audit, personal observation, performance appraisal. Expectations on internal audit are: (1) compensation for management's loss of control resulting from increased organizational complexity; (2) being the safeguard of the corporate culture through personal contacts with people in the field; (3) being a supportive function in the monitoring and improvement of the risk management and internal control system; (4) being a training ground for future managers; and (5) active collaboration with the external auditor to increase total audit coverage (Sarens and De Beelde, 2006). Quantitative control techniques are methods based on numerical performance indicators, such as the number of orders per hour. This kind of control techniques is very popular because it has a precise and objective impression. Quantitative methods include Gantt chart, PERT, break-even analysis, economic-order quantity (EOQ), variance analysis (DuBrin, 2012).

Budget is a numerical plan and the most important instrument of financial control, which defines the control of financial resources when they come to the organization (such as sales or shareholder investments) are held by an organization (e.g. operating capital or undistributed profits from past periods), and when leaving the organization (e.g., payments and expenses) (Griffin, 2016). "Budgeting has traditionally been a central plank of most organizations' control mechanisms, as it is one of the few techniques capable of integrating the whole gamut of organizational activity into a single coherent summary" (Otley, 1999, p. 370). In the 1970s, budgetary control was used as the dominant technique of management accounting (Otley, 2016). Given their quantitative nature, budgets are measures, which measure performance and allow comparisons between departments, organizational levels and between periods. Although at first sight the budget may appear to be a planning tool, it is in fact a control mechanism (Benowitz, 2001). In addition, financial statements, ratio analysis and financial audits may be used for the needs of financial control (Griffin, 2013). To use financial ratio guidelines for performance is a more advanced method of using budgets for control (DuBrin, 2012). "At a minimum, business managers should be able to understand these financial performance measures: liquidity, leverage, asset management and profitability" (Schermerhorn, 2012, p. 149).

If "what is measured tends to be done" then managers should take advantage of the Balanced Scorecard (Kaplan and Norton, 1995) to measure performance. This control tool provides a quick but exhausting view of the business. The basic principle is that if you want to be good and win, you have to keep score. And just like sports teams and organizations have better performance when all members know their score (Schermerhorn, 2012). It "is a tool which systematically expands the measurement areas traditionally involved in accounting. It thus aims to contribute to reducing the problems involved in using only financial measures for the purposes of control" (Norreklit, 2000, p. 81). BSC explores other three areas that contribute to business: customer, internal processes, and learning and growth. Managers should set goals for all four areas and then measure whether and how the goals were met (Robbins and Coulter, 2012). Compared with traditional control, BSC has several advantages: it forces managers at each level to determine specific goals and measure performance in all four areas; and it minimizes the chances of partial optimization that occurs when performance in one area increases to such an extent that it covers losses in other areas (Williams, 2012). The "history of

the development of the BSC could be applied to other management ideas, tools and practices” (Cooper *et al.* 2017).

Since the comparative method belongs to the most important ones in performing control, we cannot omit benchmarking. It looks for best practices of competitors and other subjects that lead to their top performances. Definitions of benchmarking vary, since key themes include measurement, comparison, identification of best practices, implementation and improvement (Anand and Kodali, 2008). “Benchmarking refers to the comparison of internal processes to an ideal standard. This management control also assesses and monitors trends in competitor sales, market share or volume” (Lopez-Valeiras *et al.* 2015, p. 3482). The tool should identify several so-called benchmarks, which we can define as standards of excellence to be measured and compared. Simply put, benchmarking means learning from others. It can be used to discover specific performance differences and areas for potential improvement. However, best practices do not always have to be hidden in an external environment. Sometimes, they are even inside the organization and it is only necessary to share them with others. One of the very fruitful options is a box for employee suggestions (Robbins and Coulter, 2012).

The foundation for modern management is quality control. “Total quality management” is used to describe activities that make day-to-day performance goals a reality. There is a widespread consensus that TQM is a way of managing organizations to improve their overall effectiveness (Porter and Parker, 1993). It strives for the right things to be done right from the beginning. The basis for TQM is the pursuit of continuous improvement, which means that the company is still looking for new ways to improve current performance. The idea is that we can never be satisfied because something can or has to be improved. The basic building block of quality control of each organization is measurement. If an enterprise wants quality, it must discover errors, analyze it and track down its resources, make corrections, and record what has happened. Control techniques in the area of quality management include, for example, control chart, sampling or Six Sigma.

Project management represents the responsibility for overall planning, realization and control over projects. In its essence, it is the job of the project manager to ensure that the project is well planned and then completed – timely, budget-conscious and in line with the objectives. In practice, this is aided by two control techniques known as the Gantt Chart and CPM/PERT (Critical Path Method/ Program Evaluation and Review Technique). “Network-based procedures of PERT and CPM are well known and widely used to assist managers in planning and controlling both large and small projects of all types including construction, research, development projects and many others” (Zareei, 2018, p. 756). In addition to quality control, attention should be paid to inventory when measuring performance. The goal of inventory control is to ensure that any inventory is large enough to meet immediate performance needs. Inventory control techniques include the economic order form or Just-In-Time system. When managers are considering a new product or project, a frequent question of control is “what is the break even point?” It is a point where losses end and the profits start. Managers rely on this point to make “what happens when...?”-calculations at different estimated costs and sales conditions (Schermerhorn, 2012).

Benowitz (2001) focuses in addition to classical control techniques on highly applied. She also specifies marketing controls, which allow to monitor progress towards customer satisfaction with products and services, pricing and delivery. Marketing controls are means of influencing, managing, and improving both individual and firm performance (in increasing role/task clarity, improving intrinsic motivation, and facilitating inter-personal communication and interaction) (Liang and Frosen, 2019). Examples of controls used to evaluate the function of marketing are market research, test marketing and marketing statistics. Another area is computers and information controls. In this case, key issues are controlling access to computer databases and measuring employee performance through computer-implemented control techniques.

There are many other techniques, tools or procedures, which are suitable for use in one of the steps of the control process. These techniques are, however, highly specialized for the needs of a specific industry or even a business.

### 3. Aim and Methodology

As mentioned in the introduction, the controlling theory is stable, but it does not mean that there is no change and the final result to its evolution. Thanks to the financial crisis, which has evolved from the US real estate crisis and continued in the debt crisis in Europe, control has become more prominent again. Therefore, since 2013, we have been investigating changes that occur in internal and external controlling. Multiple questionnaire surveys (2014/2015, 2016/2017, 2018/2019) serve to examine long-term changes in controlling, while we hope to discover in the long term a link between economic development and the use of this managerial function. Our other long-term goal is to follow the approach of the Eastern approach to Western control, or vice versa.

Our presented research results are coming from a questionnaire survey, which collected data at the turn of 2016 and 2017. Questionnaire's emphasis was on new trends in organizational control, as it represented the first questionnaire, the results of which should serve the needs of such a newly approved research project. Overall, 395 completed questionnaires were received, of which 376 were further processed. Nineteen questionnaires were excluded for various reasons. The sample does not represent statistical representativeness for the Slovak Republic but is compatible with its parameters.

Since several respondents from the same company were allowed for the purpose of the research project, further selection is needed for the purposes of this paper. In order to exclude questionnaires from the same companies, we always chose the highest-ranked manager in the hierarchy for whom we expect the best knowledge of our subject. Subsequently, 331 questionnaires were left for further processing. Our research sample has the following characteristics (n = 331):

- size of company (employees in 2015): 115 microenterprises, 90 small, 56 medium-large, 70 large companies;
- management level of the respondent: 120 top-management, 52 middle, 116 lower management level, 43 informed employees (Although they do not hold a managerial position, "informed employees" represent an important part of our research sample as they have access to rare business information. Included are accounting officers, economists and employees directly responsible for the control function (without being managers).)
- most frequently represented sections according to the SK-NACE classification: 69 industrial production, 66 wholesale and retail trade and repair of motor vehicles and motorcycles, 46 professional scientific and technical activities, 25 information and communication, 21 accommodation and catering services;
- higher territorial unit of Slovak Republic: 174 Bratislava (capital city and surrounding districts), 33 Trnava, 24 Nitra, 23 Trenčín, 30 Žilina, 17 Banská Bystrica, 22 Prešov, 8 Košice;
- legal form: 222 private limited liability companies, 66 joint-stock companies, 30 self-employed individuals, 5 branches of a foreign enterprise, 4 cooperatives, 4 other legal forms;
- economic result in 2015: 254 profit, 52 loss, 20 balanced economic result, 3 companies founded in 2016, 2 n/a;
- sales in 2015: 164  $\leq 2M$  Euro, 43  $2M \leq 10M$  Euro, 60  $10M \leq 50M$  Euro, 50  $\geq 50M$  Euro, 14 n/a.

Besides various other ones we asked our respondents the followed question: "Has your company introduced a new tool/method/procedure in your company that would be of fundamental concern to management control?" In every question, we asked respondents for a short justification of their choice. These justifications (in various questions) also helped us to resolve questionnaires from inadequately competent respondents. We used standard scientific methods of analysis, synthesis, induction, deduction, etc. in evaluating and interpreting the results of our questionnaire surveys. In addition to the quantitative analysis of results (identifying individual responses according to the different characteristics of the research sample), we also analyze qualitative results (distribution of qualitative responses/justifications of respondents by

content proximity). Examples of justifications with respondents' descriptions for both positive and negative answers are listed in Table 1.

**Table 1- Examples of justifications in importance of controlling in Slovak companies**

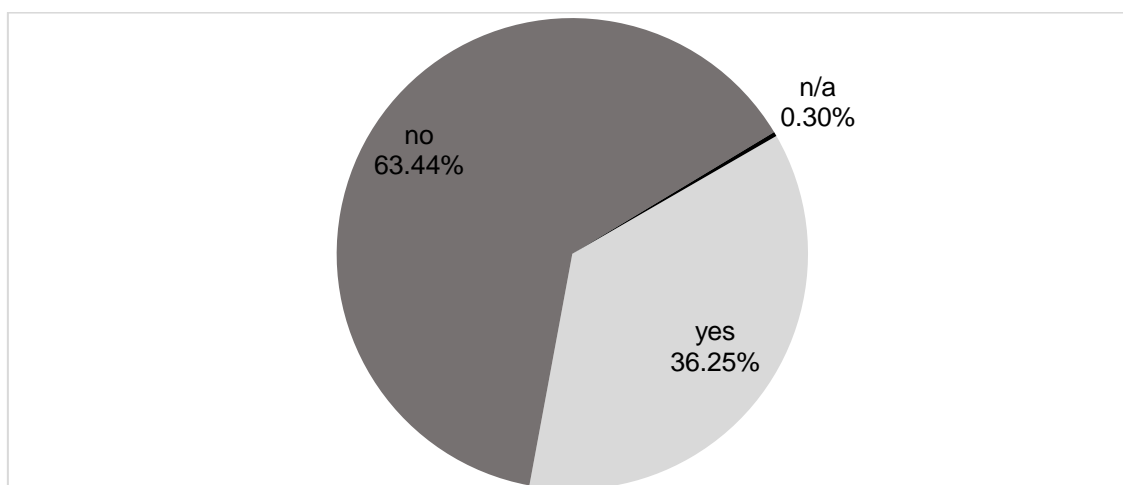
No.	Answer	Justification	Respondent description
1.	yes	There is a strategy in the Bratislava branch of our company for becoming a Center of Excellence. In other words, it is an effort to deliver services not only at the required level but to go beyond what is required. The next step is to attract services with higher added value, and later define the global processes that would govern our branches worldwide. Therefore, the individual departments need to assess their situation where they are likely to be on this road and make plans to move forward. At regular intervals, their position is evaluated.	head of department, large advisory company, BA HTU
2.	yes	An electronic network attendance system linked to wage processing has been introduced.	group manager, large transport company, BA HTU
3.	yes	Expense management tool tracking expenses, Attendance tool tracking attendance etc.	project manager, large IT company, BA HTU
4.	yes	A site manager for managing/controlling personnel has been hired.	executive, cleaning micro-enterprise, BA HTU
5.	no	Old methods are proven and do not need to be changed. Although I do not say that in the future there will be no need for change in society.	superior manager, large electronic producer, ZA HTU
6.	no	The control has been very important since my employment to the company and its process has been thoroughly elaborated.	Area Facility Manager, small reality office, BA HTU
7.	yes	Since we are not a large manufacturing company, we have a specialized production of up to 20 employees; we have a personal responsibility of each employee for his work put in place, before the inspection was performed collectively for the teams.	owner, small machines installation company, TN HTU
8.	yes	Changes in control and their impact on managerial positions are ongoing. In short, they are more about delegating control to higher positions and limiting control at lower positions.	site manager, large electronics retailer, BA HTU
9.	yes	We have introduced a directive called the life cycle of a contract. The dates of each activity for the order are exactly defined there. We can easily control whether all departments and staff are performing timely and correct steps.	sales manager, medium sized wholesale company, NR HTU
10.	yes	The meetings and economic analyzes are not only with the company's director, but also with the heads of the individual departments.	executive, small property management company, ZA HTU
11.	yes	A separate directive on management and control is developed for each activity.	retail manager, small insurance broker company, TT HUT
12.	yes	Rather, new technologies have been introduced, which have made it easier to control; and some controls that had been performed regularly are performed only occasionally, on a continuous basis.	production manager, large furniture producer, TT HUT
13.	yes	In a young and fast-growing company, processes (including management control) need to be constantly developed and improved until they are optimal.	controlling specialist, medium large technical testing company, BA HTU
14.	no	A new control method was introduced some 3-4 years ago to ensure workers' safety by checking that workers control and comply with all rules related to their safety and plant safety.	group manager, large energy producer, BA HTU
15.	yes	A new information system has been introduced that forces management staff to report and regularly compare selected indicators.	sales director, small telecom company, BA HTU

**Note:** HTU – higher territorial unit; BA – Bratislava (capital city and surrounding district), TT – Trnava, NR – Nitra, TN – Trenčín, ZA – Žilina, BB – Banská Bystrica, PO – Presov, KE – Košice.

**Source:** Author's own research

#### 4. Research Results

Almost every respondent (330) answered the question regarding new tools/methods/procedures in controlling in their company. The one, who did not provide an answer, stated the following reason in his justification: "I am in the company for a short while, so I cannot judge this." The share of positive responses to this question did reach 120, with up to 119 respondents stating a justification. Members from 210 enterprises declared their companies did not implement a new tool, method or procedure in the field of controlling. We had big luck with our respondents probably, because even in the group with negative responses, we got 103 justifications. Due to the high willingness of respondents to provide not only quantitative but also qualitative responses, we have an increased credibility of our research on the management function of controlling. The share of answers is shown in Figure 1.



**Figure 1. New tools/methods/procedures in researched companies**

Source: Author's own research

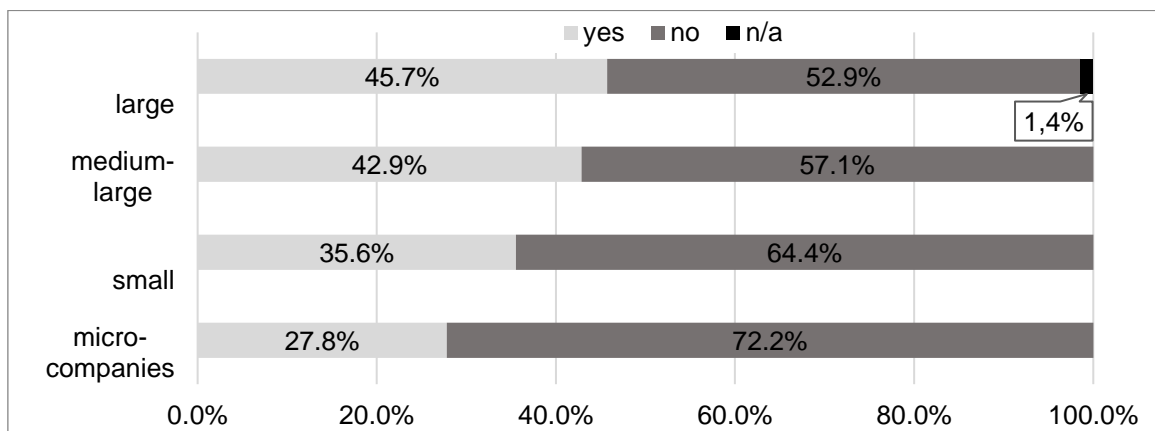
In our paper, we will not pay much attention to respondents or companies who have stated that they did not implement something new in their control function. In their justifications, the members of the group with negative responses mostly mentioned the following reasons: good functioning of the current control system/changes were not necessary; changes are planned but not yet implemented; changes took place more than a year ago; ISO certification sufficiently monitors the control of the company; the system improves with small almost invisible changes; it is a smaller enterprise with a clear control system.

Later on, we will focus on the analysis of the results by individual categories of respondents. Although we have other categories available, we will focus on: the size of the company; the economic outcome; the respondent's level of management; the perceived importance of control in the company; the respondent's attitude to control in the situation, when he is the object of control.

##### 4.1. Size of the company

The first category deals with the general size of businesses. The companies we surveyed are divided according to the European Commission's directive. We will not take into account the annual turnover or the total annual balance sheet, but the number of employees as the standard number. As can be seen in Figure 2, with the increasing number of employees (and therefore the increasing size of the enterprise) also the number of positive responses is increasing. Of the 331 enterprises surveyed, 32 large enterprises, 24 medium-sized enterprises, 32 small businesses and 32 micro-enterprises reported new tools, methods or procedures in control. The percentage of individual responses is shown in the diagram.





**Figure 2. New tools/methods/procedures (company's size)**

Source: Author's own research

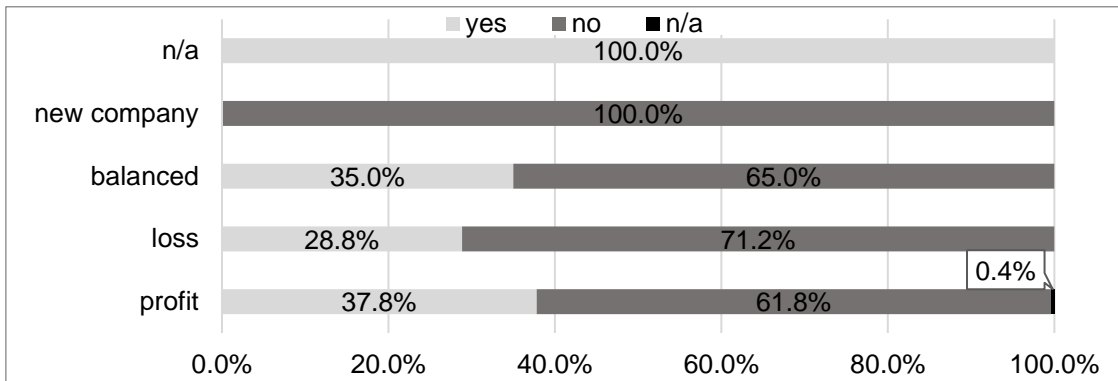
#### 4.2. Economic outcome of the company

A very interesting category is the economic result of the company. Controlling is closely linked to the overall order in the company, which is then reflected in the economic result. Restriction may come from the external environment of an enterprise that the control system can monitor but not affect. However, the assessment of this category seems problematic. Companies in our latitudes do not like to disclose their economic results, unless they are really necessary (accounting, tax obligations). In view of this, many economic results have to be searched through publicly available sources. As a result, we have reduced the number of blank responses to two. Another three companies started their operation in 2016 and therefore have not yet had any economic results. Also, a balanced economic outcome is problematic as it does not show either positive or negative trends of company's development. Another important limitation in this category is profit optimization. It can cause an enterprise to lose, even if all of its processes are set to generate profits. Therefore, research results may be distorted.

Expectations should speak in a clear way: Companies with a reported loss should have positive responses to our question and implement new tools, methods or procedures for control. But reality does not be so clearly. We do not need to take a closer look at newly created businesses, as the new developments in the area of control will reflect in time when real problems emerge. All three respondents with new business answered negatively to our question. Interesting is the result in the category of missing economic results where both respondents reacted positively, and their companies implemented changes in control. In the case of a balanced economic result, we recorded 13 negative responses and seven positive ones.

However, let us proceed to large categories with a larger number of respondents. Our assumption that the loss-making enterprises have previously implemented something new into control has not been confirmed. Only 15 of 52 companies with a loss in the concerned period implemented new tools, methods or procedures. In this case, however, we would be cautious with the conclusions, given the limitations resulting from profit optimization.

On the other hand, results in profitable businesses can really be caused by putting something new into control. In this case, new control tools, methods and procedures were introduced in 96 out of a total of 254 enterprises that were profitable in the examined period. The shares of answers are shown in Figure 3.



**Figure 3. New tools/methods/procedures (economic outcome)**

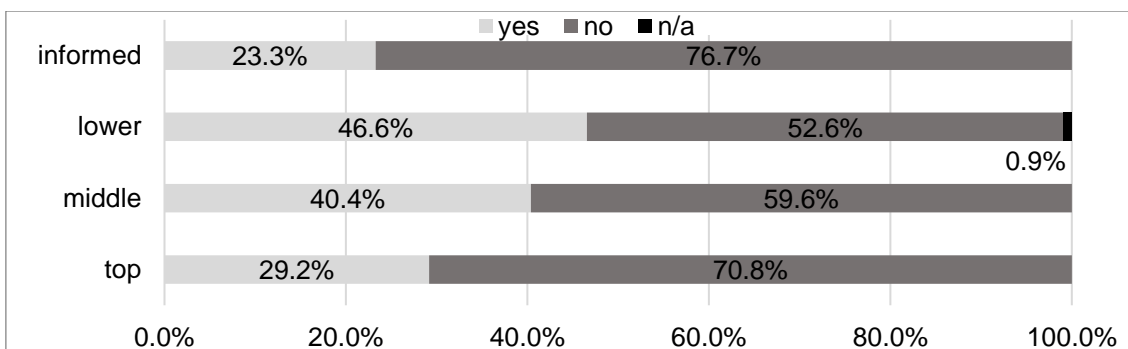
Source: Author's own research

#### 4.3. Respondent's level of management

Another category by which we can assess the results of our research is the position of the respondent in the organization hierarchy. Simply put, at which level of management the respondent is located. In general, management theory distinguishes between top, middle and lower management. In addition to these basic categories, we also added so-called informed employees to the sample. Although they do not hold a managerial position, they have access to rare business information. Included are accounting officers, economists and employees directly responsible for the control function (without being managers).

In the results we found an interesting fact. The lower the corporate hierarchy, the more positive answers we get. However, this finding only concerns management. As soon as we look at the results of informed (regular) employees, we will find that the positive share decreases again. This category recorded ten positive responses and up to 33 negative.

Let's go up the ladder: we have very high share with 54 positive responses, then 62 negative responses, and one blank answer for the lower management. The middle management reported 21 positive and 31 negative responses regarding new tools, methods and procedures. The second lowest share of positive responses is found in top-management: 35 positive and 85 negative responses. Percentage shares per category are shown in Figure 4.



**Figure 4. New tools/methods/procedures (respondent's management level)**

Source: Author's own research

#### 4.4. Perceived importance of control in company

In addition to many other questions, we also asked respondents in our questionnaire how they perceive the importance of the management function of controlling in their business. They could choose on a five-level scale from absolutely unimportant, through mean value present to highest very important. Of course, we were very pleased, if they give us the justification of their choice.

We will now combine the results of the issue of importance with the implementation of new tools, methods and procedures in control. The combination results (Figure 5) show that when control is considered to be very important or important in an enterprise, it is more likely that something new will be implemented in the control. In the case of very important control, there are 59 positive responses and 83 negative. When control is perceived important, 49 answers are positive, 84 negative and one empty. In the mean value (control is present in the enterprise) we have 9 responses yes and 34 no. In the case of little important control in a business, the proportion of positive and negative answers is three to nine. One single respondent said that control in his business was absolutely unimportant and also that nothing new in control was implemented in the company.

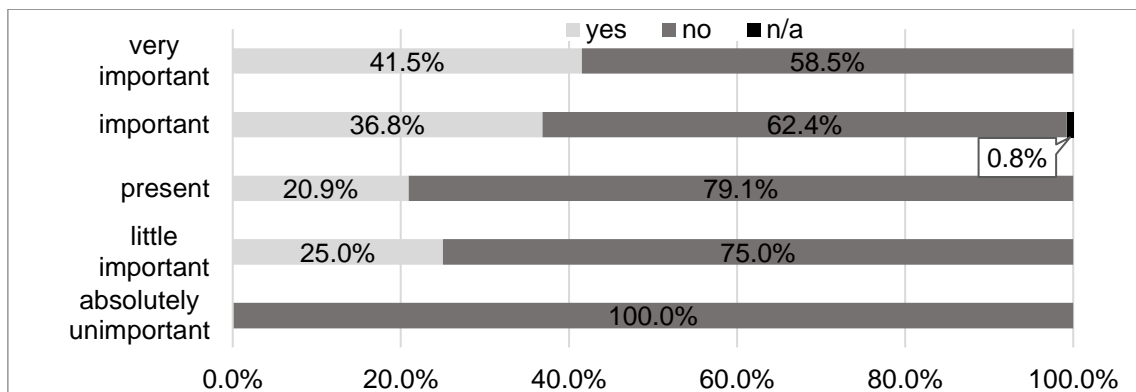


Figure 5. New tools/methods/procedures (importance of control in company)

Source: Author's own research

#### 4.5. Respondent's attitude in the role of being a control object

The last category we want to assess the results of our research is the respondent's attitude to control when someone else controls him. In the eastern approach to control, we call this role a control object. On the contrary, when he controls someone else, we consider him in the Eastern approach to control as the subject of control. The fact that managers have a positive relationship to control, even in a country where control has been abused for a long time, is another story. In this paper, we focus on new tools, methods, and procedures in control. The values we have measured by combining these two questions do not show a clear trend.

We see that respondents who have a positive attitude to control (in the role of an object) have reported to a greater extent that a new tool, method or procedure has been introduced in their business (yes/101 no). Ultimately, this result, as indicated in Figure 6, is not too different from respondents who have a negative attitude to control (68 yes / 101 no). We can see a more significant difference in the category of neutral attitude towards control when the manager is controlled by another person (39 yes/89 no/1 no answer).

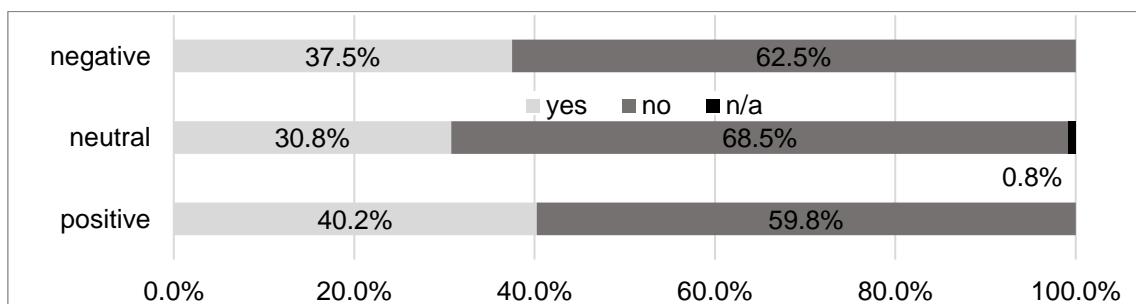


Figure 6. New tools/methods/procedures (respondent's attitude when being controlled)

Source: Author's own research

## 5. Analysis of qualitative responses

As indicated above, we did not only collect quantitative data in our questionnaire survey, but we also asked our respondents to substantiate their answers. We call these qualitative responses justifications. Processing such data is, however, relatively demanding. This is especially true when you get an unusually large amount of data. As mentioned earlier, we have not obtained qualitative data (even with this particular questionnaire item) just in positive but often also in negative responses.

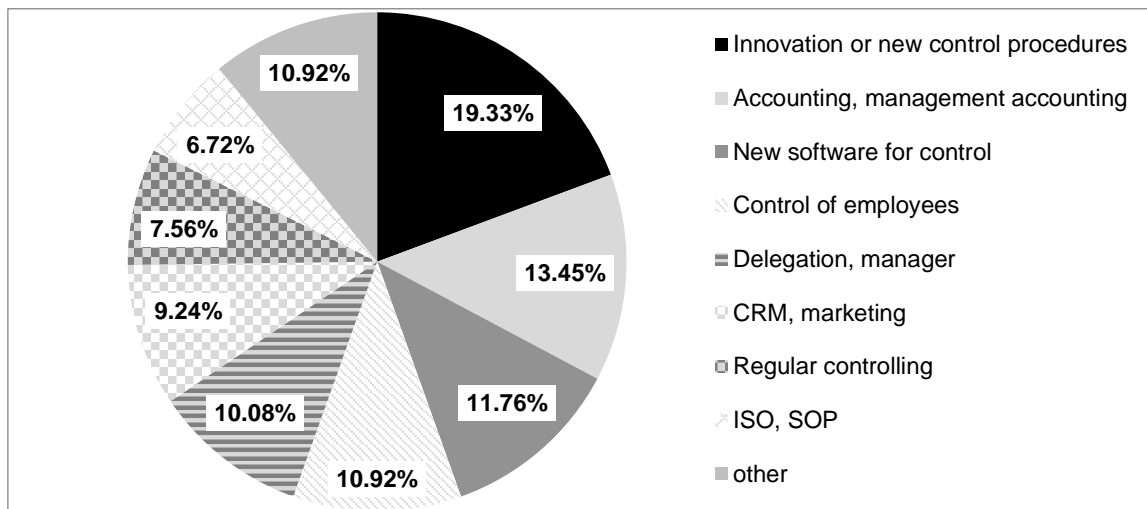
Out of the 331 processed questionnaires, 120 had a positive answer, when asked for new tools, methods and procedures in control. Only one answer did not contain justification (n=119). On the other hand, up to 103 of the 210 negative answers had (although at least a short) justification. As mentioned, one questionnaire did not contain an answer of the question. Let's analyze the obtained data for positive answers.

To divide qualitative responses and their subsequent quantitative expression, we have created twelve different categories according to the relatedness of each individual justification. The categories, their detailed description and the number of responses from the sample of 119 positive responses to justification are listed in Table 2 and the share of individual categories is shown in Figure 7.

**Table 2. Categories of qualitative responses**

Category	Category description	Number of responses
Innovation or introduction of new control procedures	Introducing completely new control processes or upgrading control processes already in use. Some responses also resulted in continuous improvement of processes – not just a one-time operation.	23
Accounting, management accounting	Systems and processes relating to management accounting, financial accounting and other financial operations	16
New software for control	Implementation of software to help control, perform various business activities, improve quality of work, automation overall, etc.	14
Control of employees	Processes regarding any employee control – whether attendance, performance, etc.	13
Delegation, manager	The emergence of new managerial functions what is related to delegation. Delegation to lower levels of management or other employees.	12
CRM, marketing	Responses, in particular concerning customer relationships; marketing overall.	11
Regular controlling	Increase in control intensity, especially regular repetition.	9
ISO, SOP	Processes relating to the use of ISO standards and guidelines (SOP – standard operating procedures or general regulations, procedures, etc.).	8
other	Quality control (5), KPI (4), Comprehensive business process control system (2), Feedback (2)	5

**Source:** Author's own research



**Figure 7. Share of categories of qualitative responses**

Source: Author's own research

## 6. Conclusion

Controlling as a managerial function is evolving. Its intensity is changing – often depending on the economic cycle, the attitudes of managers to control change, and its importance changes. In order to respond adequately to internal and external changes, new tools, methods and procedures must also evolve. It does not matter, whether they come from the academic community as normative tools or directly from practice as a response to a specific problem. As the results of our research show, businesses are trying to adapt. The questionnaire survey was conducted at a time of economic growth, and therefore we can say that they are sufficiently preparing for the phase of economic downturn.

The increasing likelihood of introducing new tools, methods and procedures in control with the increasing business size, in our view, is very much related to the complexity of the business. While in the case of small businesses the work and the processes are quite transparent, in medium-sized and large enterprises, managers increasingly have to rely on indirect control through certain media. This creates a fertile ground for the emergence of something new in control. As we have already mentioned in research results, it is not easy to present more explicit conclusions in the relation of new tools, methods and procedures of control and the economic outcomes. One of the biggest obstacles is profit optimization, which can optically change a well-functioning business, create to a problematic one. However, public administration in the Slovak Republic has taken several steps to prevent optimization, and thus has fallen in the future; we expect a higher relevance of the data obtained. As a confirmation of this assumption, we perceive the increasing tax discipline in recent years.

In our opinion, the increase in the number of positive responses at the lowering the level of management is related to the fact that top management often decides on control tools, methods and procedures, but uses them to a lesser extent. Conversely, the use rises with lower levels of management. Another factor that plays a role here is the size of the business. With a closer analysis of the answers, we find that up to 52 of the 85 negative responses are coming from the category of micro-enterprises. Up to 46 responses come from businesses with less than 5 employees. Controlling such a small number of people does not require a comprehensive control system and is often built on mutual trust and responsibility. Surprisingly, there appears to be a low share of positive responses in the category of informed employees as they could use something new in the control themselves, or possibly design even such thing in their company. By deeper analysis, we cannot say that negative responses are only in non-purely control positions (accountants or economists). The ratio of control staff is 14 negative responses to 5 positive.

In the answers of our respondents, we recognize a great connectivity between the perceived importance of control in the company and the introduction of new tools, methods and procedures in this area. Simply put, in such a way top management could communicate the fact that controlling belongs to its priorities and wishes to have a high degree of order in the business. Ultimately, we cannot say that the introduction of new instruments, methods and procedures in control has a positive impact on the attitude to controlling. The results achieved in the combination of attitudes to control and new tools have not been able to convince us of a more explicit relationship. However, we will be following this relationship for a longer time, as we plan to have another round of questionnaire survey at the turn of 2018 and 2019, and questions about attitude and new instruments will be a part of this survey.

**Acknowledgment:** This paper is a part of the research project “Trends of internal control in business entities in the light of new challenges” (no. 1/0135/17) funded by the Scientific Grant Agency VEGA.

## References

- Anand, G., and Kodali, R., 2008. Benchmarking the benchmarking models. *Benchmarking: An International Journal*, 15(3), pp. 257-291. <https://doi.org/10.1108/14635770810876593>
- Becker, W., Baltzer, B., Ulrich, P., 2011. Controlling as a science in Germany. *The European Journal of Applied Economics*, 8(2), pp. 40-54.
- Benowitz, E., 2001. *Principles of management*. New York: Hungry Minds.
- Bhattacharyya, D. K., 2008. *Organizational systems, design, structure and management*. Mumbai: Global Media.
- Cooper, D. J., Ezzamel, M., and Qu, S. Q., 2017. Popularizing a management accounting idea: The case of the balanced scorecard. *Contemporary Accounting Research*, 34(2), pp. 991-1025. <https://doi.org/10.1111/1911-3846.12299>
- Dubrin, A. J., 2012. *Essentials of management*. 9th ed. Mason: South-Western.
- Fayol, H., 1917. *Administration industrielle et générale; prévoyance, organisation, commandement, coordination, controle [Industrial and general administration; foresight, organization, command, coordination, control]*. Paris: H. Dunod & E. Pinat.
- Fells, M. J., 2000. Fayol stands the test of time. *Journal of Management History*, 6(8), pp. 345-360. <https://doi.org/10.1108/13552520010359379>
- Griffin, R. W., 2016. *Fundamentals of management*. 8th ed. Boston: Cengage Learning.
- Griffin, R. W., 2013. *Management*. 11th ed. Mason: South-Western.
- Guenther, T. W., 2013. Conceptualisations of ‘controlling’ in German-speaking countries: Analysis and comparison with Anglo-American management control frameworks. *Journal of Management Control*, 23(4), pp. 269-290. <https://doi.org/10.1007/s00187-012-0166-7>
- Hall, M., 2010. Accounting information and managerial work. *Accounting, Organizations and Society*, 35(3), pp. 301-315. <https://doi.org/10.1016/j.aos.2009.09.003>
- Kaplan, R. S., and Norton, D. P., 1995. Putting the balanced scorecard to work. In: C. E. Schneier, D. G. Shaw, R. W. Beatty, L. S. Baird, eds. 1995. *Performance measurement, management, and appraisal sourcebook*. Amherst: HRD Press.
- Koontz, H. and O'Donnell, C. 1955. *Principles of management: An analysis of managerial functions*. New York: McGraw-Hill.
- Liang, X., and Frosen, J., 2019. Examining the link between marketing controls and firm performance: The mediating effect of market-focused learning capability. *Journal of Business Research*. (in press) <https://doi.org/10.1016/j.jbusres.2019.01.021>
- Lopez-Valeiras, E., Gomez-Conde, J., and Naranjo-Gil, D. 2015. Sustainable innovation, management accounting and control systems, and international performance. *Sustainability*, 7(3), 3479-3492. <https://doi.org/10.3390/su7033479>
- Majtan, M., Grznar, M., Matulčíková, M., Papulova, E., Slavik, S., Szabo, L., Szarkova, M., Thomasova, E., 2016. *Manazment [Management]*. Bratislava: Sprint2.

- McKenna, S., Garcia-Lorenzo, L., and Bridgman, T., 2010. Managing, managerial control and managerial identity in the post-bureaucratic world. *Journal of management development*, 29(2), 128-136. <https://doi.org/10.1108/02621711011019260>
- Mintzberg, H., 2009. *Managing*. San Francisco: Berrett-Koehler Publishers.
- Misun, J., Misunova Hudakova, I., 2017. *Kontrolovanie v manazmente [Controlling in management]*. Bratislava: KARTPRINT.
- Misun, J. and Misunova Hudakova, I., 2018. New trends in control(-ling): Qualitative analysis of results. *Proceedings of the 8th Business & Management Conference, Venice, Italy, 04 - 07 September 2018*, pp.137-157. <https://doi.org/10.20472/BMC.2018.008.010>
- Norreklit, H., 2000. The balance on the balanced scorecard a critical analysis of some of its assumptions. *Management accounting research*, 11(1), pp. 65-88. <https://doi.org/10.1006/mare.1999.0121>
- Osmanagic Bedenik, N., and Lalovac, B., 2007. Controlling – Factor for business success an example from the hotel industry. *Acta turistica*, 19(1), pp. 83-99.
- Otley, D., 1999. Performance management: A framework for management control systems research. *Management Accounting Research*, 10(4), pp. 363-382. <https://doi.org/10.1006/mare.1999.0115>
- Otley, D., 2016. The contingency theory of management accounting and control: 1980–2014. *Management Accounting Research*, 31, pp. 45-62. <https://doi.org/10.1016/j.mar.2016.02.001>
- Porter, L. J., and Parker, A. J., 1993. Total quality management—the critical success factors. *Total quality management*, 4(1), pp. 13-22. <https://doi.org/10.1080/095441293000000003>
- Reid, D., 1995. Fayol: From experience to theory. *Journal of Management History*, 1(3), pp. 21-36. <https://doi.org/10.1108/13552529510095134>
- Robbins, S. P., Coulter, M. 2012. *Management*. 11<sup>th</sup> ed. Upper Saddle River (NJ, USA): Prentice Hall.
- Sarens, G., and De Beelde, I., 2006. The relationship between internal audit and senior management: A qualitative analysis of expectations and perceptions. *International Journal of Auditing*, 10(3), pp. 219-241. <https://doi.org/10.1111/j.1099-1123.2006.00351.x>
- Schermerhorn, J. R., 2012. *Exploring management*. 3rd ed. Hoboken: John Wiley & Sons.
- Schwarz, R., 2002. *Controlling Systeme. Eine Einführung in Grundlagen, Komponenten und Methoden des Controlling [Controlling systems. An introduction to the basics, components and methods of controlling]*. Wiesbaden: Gabler.
- Tripathi, P. C., and Reddy, P. N. 2012. *Principles of management*. 5th ed. New Delhi: Tata McGraw Hill.
- Williams, C. H., 2012. *MGMT4*. Mason: South-Western.
- Zareei, S., 2018. Project scheduling for constructing biogas plant using critical path method. *Renewable and Sustainable Energy Reviews*, 81(1), pp. 756-759. <https://doi.org/10.1016/j.rser.2017.08.025>