

EXPLORING THE LEVEL OF UTILIZING MANAGEMENT REPORTS IN DECISION-MAKING IN CROATIAN COMPANIES

Mirjana Hladika*
Berislav Žmuk**

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Abstract

Effective business decisions have a positive impact on the overall business of a company. Each business decision should be based on relevant, high-quality, and reliable information prepared by a management accountant in accordance with managers' specific requirements. In order to be support the efficient decision-making process, the management accounting information should be appropriate for a particular business decision, and it should reflect the role, responsibility, and value it has for a manager that participates in the decision-making. This paper aims to investigate whether the management accounting information system is developed in Croatian companies. In order to collect data for the analysis, a web

survey was conducted on a representative sample of Croatian companies. Overall, 225 companies from the real sector participated in the survey. The results have shown that managers consider management reports an important basis in decision-making. Furthermore, the findings of this study have shown that managers in large companies use management reports to a greater extent in decision-making than managers in micro, small, and medium-sized companies do.

Keywords: *management accounting information system, management accounting information, management reports, decision-making, Croatia*

1. INTRODUCTION

According to the Institute of Management Accountants (2008), “*management accounting is a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist the management in formulation and implementation of an organization's strategy.*” Therefore, management accounting

represents a crucial and major source of information for the management and for making managerial business decisions (Mia and Chenhall, 1994).

The environment in which modern companies operate is very dynamic and subject to change. Therefore, the role of management accounting and management accountants in a company is changing constantly and rapidly. The key external factors that influence the development and change in

* Mirjana Hladika, PhD, Assistant Professor, University of Zagreb – Faculty of Economics and Business, Trg J. F. Kennedyja 6, HR-10000 Zagreb, Croatia, Phone: +385 1 2383 116, E-mail: mhladika@efzg.hr, ORCID: <https://orcid.org/0000-0003-3170-9138>

** Berislav Žmuk, PhD, Assistant Professor, University of Zagreb – Faculty of Economics and Business, Trg J. F. Kennedyja 6, HR-10000 Zagreb, Croatia, Phone: +385 1 2383 372, E-mail: bzmuk@efzg.hr, ORCID: <https://orcid.org/0000-0003-3487-1376>

management accounting are primarily the globalization of business, technological progress, and the digitalization of business processes. Changes in the economic environment influence the sustainability and competitiveness of the company, which have an impact on the accounting practice of the companies' management. In this transformation and changing roles, the biggest changes relate to the role of management accounting and management accountant in a company.

Previous research and practice unequivocally point to the link between effective management and developed management accounting information system in a company (e.g. Alawattage et al., 2007; Dobroszek et al., 2019; Eierle and Schultze, 2013; Lääts and Haldma, 2012). In today's business environment, the fact is that management accounting without managers' needs for management accounting information would not make sense. In addition, managers without the management accounting information do not have much of a chance to succeed in a competitive environment.

When running a business and making business decisions, managers encounter numerous problems on a daily basis; to solve them, they need adequate, precise, and reliable information prepared by management accountants and presented in the form of a management report. In order to provide managers with all the necessary information to make right and appropriate business decisions, many companies have simultaneously established an accounting information system and a management accounting information system. The accounting information system focuses on processing data on past business events, while the management accounting information system provides (top, middle, and lower) managers with relevant information that will be the basis

for strategic, tactical, and operational decisions (Gulin et al., 2011; Mia and Chenhall, 1994; Napitupulu, 2015).

The products of the management accounting information system are different reports prepared according to the specific needs of managers. Management reports comprise different financial and non-financial information prepared by management accountants according to managers' requirements (Arsov and Bucevska, 2017). Management reports are internal reports, which are not available for external users, unlike financial statements that are publicly available for all interested users (e.g. existing and potential investors, lenders, creditors, and others). The users of management reports are internal users such as department managers, the general manager, company officers, and other staff members working in a supervisory capacity (Martin, 2019). Managers at different levels of responsibility may appreciate various scope, content, and timing for management reports and information, so the process of decision-making is specific for a particular business decision and particular manager.

Based on the above, the objective of this study is to investigate if the management accounting information system is developed in Croatian companies and to examine the level of utilizing management accounting information presented in management reports according to the manager's requirements in making certain business decisions. Accordingly, two research hypotheses were developed. The first research hypothesis is that managers consider management reports as an important basis in decision-making. The second research hypothesis is that managers in large companies use management reports to a greater extent in decision-making than managers in micro, small, and medium-sized companies.

Previous research in the area of management accounting primarily refer to developed countries (e.g. Libby and Waterhouse, 1996; Granlund and Lukka, 1998a; Tillema, 2005; Heinzlmann, 2016), where the management accounting information system is a common part of business practice of most companies. There are a few studies related to the changes in management accounting practice in Eastern and South-Eastern European countries, which are transition or developing countries (e.g. Vámosi, 2000; Haldma and Lääts, 2002; Dmitrović-Šaponja and Suljović, 2017). Considering that fact, the contribution of this paper to the field of research is valuable since it comprises research in management accounting in Croatia, which is a transition country. In addition, studies on management accounting are rare. Accordingly, the findings of this study contribute to the existing literature in management accounting.

The paper is organised as follows. This chapter introduces the aim of the research, followed by the second chapter, which provides the literature review of the most important previous research related to the paper topic. The third chapter describes data and research methodology, whereas in the fourth chapter, the analyses are conducted, and the results are discussed. The final fifth chapter concludes the paper and formulates recommendations for further research.

2. THEORETICAL BACKGROUND

The purpose of management accounting and management reports is to present financial and non-financial information to be used by managers for more efficient planning and decision-making, more efficient utilization of resources, performance measurement, and formulation of business

policy and company's strategy with the ultimate goal of increasing the value of all interested stakeholders. The role of management accounting in a company is to support the decision-making process by collecting, processing, analysing, and communicating information that helps managers plan, control, and evaluate business processes and implement a company's strategy. When preparing management information for making a certain business decision, management accountants should prepare very focused, detailed, and specific information for that decision. If too much information (irrelevant and useless information) is prepared for managers, it leads to confusion, and it is useless for managers (Wouters and Verdaasdonk, 2002; Hall, 2010). To prepare appropriate information and its analysis that will be useful in decision-making, management accountants should be familiar with the type of business decision. Management accountants should prepare and analyze information alternatives for a certain business decision (Thyssen et al., 2006). Furthermore, Trenca and Nørreklit (2017) emphasize that most business decision-making processes involve managers of different units within the company, and they have a different stimulus. Management accounting draws information to prepare management reports from the company itself but also increasingly focuses on the environment, competition, business sustainability, and corporate social responsibility (Burritt and Saka, 2006).

The utilization of management reports and management accounting information in the process of decision-making in a particular company involves different analytical stages in the process of decision-making, which includes steps from the definition of a problem to the collection of appropriate data and their analysis (Arbnor and Bjerke, 2009; Nielsen et al., 2015). Variables

included in the decision-making process should cover internal and external circumstances in which the company operates. Some of the external factors are the company's supply chain, company's competitors, the economy of a country, while internal factors include elements such as the size of the company, its strategy, and organizational culture. Efficient and strictly directed decision-making should unite the internal practice of the company and the external environment (Saukkonen et al., 2018).

Since management accountants provide managers with information needed to make operational, tactical, and strategic decisions, they are very often important members or advisers of top management who actively participate in the selection of strategic options. McGregor (2001) points out that management advisors describe the quality and speed of decision-making as the key determinants of the top management team's success. Management accountants enjoy a recognizable image in the business world and increasingly appear as associates who, with their specific knowledge and expert advice and specific information at their disposal, provide support for the implementation of ideas and decision-making at various hierarchical levels (Hladika, 2015). Chief financial officers (CFOs) demand high-quality information that drives business decisions; adequate management accounting information leads to efficient business decisions that generate the company's performance (PWC, 2008).

In order to prepare information that is useful and relevant for managers, it is important to know which type of decision they are going to make and how the system that allows managers to obtain the required information is developed. Management accountants play a key role in the design and functioning of the company's management

accounting information system and can contribute to the company's success by participating in a company's value-creating activities (Duh et al., 2014). The purpose of the management accounting information system is to produce information based on different procedures and processes, which the managers require for conducting their main activities – planning, decision-making, and controlling, as well as for measuring the managers' performance (Grandlund and Lukka, 1998b). Chenhall and Morris (1986) point out that the scope of management accounting information system depends on three dimensions – focus (internal or external), quantification (financial and non-financial information), and time horizon (historical, future, short run, long run).

The value of management accounting information system should be observed from the point of its perceived value for the managers and accordingly for managers' utilization of management reports in making business decisions, thus improving its efficiency. Adeoti-Adekeye (1997) defined four different elements that characterize the management accounting information system: *“focus on the information designed for the manager in the organisation, structural flow of the information, data integration as a part of certain business function in the organisation, and reporting.”*

Typical business decisions that management accounting information and reports are prepared for include: investment decisions, financing decisions, cost management decisions, decisions on new product development, (operational, tactical, and strategic) decisions on making a business plan, decisions on resource planning, decisions on rewarding employees (Drury, 2015; Gulin et al., 2011; Proctor, 2012).

According to the results of studies conducted in transition countries by Glavan et

al. (2007) and Jinga et al. (2011), managers usually base their decisions on financial information from financial accounting, and they do not use management accounting information and management reports. In 2004 and 2007, Lääts and Haldma (2012) conducted an empirical research using the questionnaire survey on a sample of 140 large Estonian companies from different industries to examine the scope and utilization of management accounting information systems. Research results show that management accounting information systems primarily focus on internal data, financial information being the most important one, and that information is the combination of future and past orientation. Furthermore, management accounting focuses on cost budgeting, separation of fixed and variable costs, direct costing, and analysis of contribution margin. Managers emphasize the use of traditional financial information (e.g. net income, revenue, costs, EBIT) rather than the modern financial approach (e.g. discounted cash flow, EVA calculation, profitability analysis). Management reports are usually prepared on a monthly basis.

Dobroszek et al. (2019) examined the managers' perception of the management accounting information system in transition countries on a sample of 154 companies from Poland and Romania. The empirical study was conducted between May 2015 and March 2016 using a survey. They found that managers mostly use the financial information (financial results, costs, revenues, financial ratios) and budgetary data with the analysis of variance, while the lowest interest is in non-financial data. Research results showed that managers use management accounting information mostly for planning,

budgeting, and cost and financial control, rather than for performance management, and formulation and implementation of strategy and decision-making.

3. DATA AND METHODOLOGY

In order to examine if the management accounting information system is developed in Croatian companies and to investigate the level of utilizing the management accounting information, presented in management reports in making business decisions, primary research in the form of a web survey was conducted. The use of a survey as a research method is very often used in management accounting (e.g. Dobroszek et al., 2019; Lääts and Haldma, 2012; Petera and Šoljaková, 2020).

To select companies that were going to be invited to participate in the survey, the Registry of annual financial statements kept by the Financial Agency was used as a sampling frame. According to the Law on Accounting (Official Gazette, 78/15 – 47/20), companies are divided into micro, small, medium, and large companies according to three criteria – total assets, total revenues, and the average number of employees during the year (Table 1). Large companies are those who exceed two out of the three criteria for medium-sized companies. A total of 800 companies (200 micro, 200 small, 200 medium, and 200 large) from the real sector, which had submitted their financial statements for 2014 in the Registry of annual financial statements, was selected. The selection of companies was conducted using the simple random sampling procedure.

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Table 1. Classification criteria for determining company size

Criteria	Micro	Small	Medium
Total assets (EUR*)	344.370	3.973.510	19.867.550
Total revenues (EUR*)	688.740	7.947.020	39.735.100
Average number of employees during the year	10	50	250

* Exchange rate 7.55 HRK/EUR

Source: Law on Accounting, Official Gazette, No. 78/15 – 47/20, Article 5.

Overall, 800 Croatian companies were invited by e-mail to participate in the survey. The target respondent in a company was a senior manager, a manager of an investment centre of responsibility, a manager of a specific business function, or a project manager. The invitation e-mail included a unique hyperlink, which led the companies (respondents) to the web survey. The survey

data was collected from March to May 2016. Except for the initial invitation to the survey, an additional reminder e-mail was also sent. Ultimately, 225 companies participated in the survey. Consequently, the achieved response rate was 28.13%. Table 2 shows the sample structure by the size of the company and main business activity.

Table 2. Summary statistics related to the sample structure

Size of the company	Number	Percentage (%)
Micro	76	33.78
Small	107	47.56
Medium	33	14.67
Large	9	3.99
Total	225	100
Main business activity	Number	Percentage (%)
Manufacturing	44	19.56
Trade	43	19.11
Service	119	52.89
Other	19	8.44
Total	225	100

Source: Authors.

Primarily small companies participated in the survey, i.e. 107 of them or 47.56% of the invited small companies, whereas only 9 large companies (3.99%) took part in the survey. A total of 76 micro companies (33.78%) and 33 medium-sized companies (14.67%) participated in the survey. According to the main business activity, the distribution of companies in the sample is the following: 119 service companies (52.89%), 44 manufacturing companies

(19.56%), 43 trade companies (19.11%), and 19 companies whose main business activity is outside the early mentioned categories (8.44%). The vast majority of companies in the sample are in domestic private ownership (180 companies or 80%). Approximately the same number of companies in the sample are in domestic public ownership (21 companies, 9.33%) and in foreign ownership (24 companies, 10.67%).

If observing the respondents in the companies, it can be concluded that significantly more female than male respondents completed the survey. Thus, 143 women (63.56%) and 82 men (36.44%) participated in the survey. According to the respondents' function in the company, there were 75 senior managers (33.33%), 7 managers of an investment centre of responsibility (3.11%), 84 managers of a specific business function (37.34%), and 12 project managers (5.33%). The other 47 respondents (20.89%) were mainly accountants and company owners. The same function in the company was held for 5 years or less by 25 respondents (11.11%), between 6 and 10 years by 51 respondents (22.67%), between 11 and 15 years by 56 respondents (24.89%), between 16 and 20 years by 38 respondents (16.89%), and for more than 20 years by 55 respondents (24.44%). Furthermore, only 16 respondents (7.11%) in the sample had 10 years or less of work experience. In the sample, 74 respondents (32.89%) had between 11 and 20 years of work experience, 85 respondents (37.78%) between 21 and 30 years, 44 respondents (19.56%) between 31 and 40 years, and 6 respondents (2.66%) had more than 40 years of work experience. The basic characteristics of respondents reveal that respondents are mostly very experienced in their work. Furthermore, a vast majority of managers in the sample

are expected to make important business decisions. These facts ensure a good background for the respondents, making them highly suitable for the study on the importance of management reports in making business decisions in Croatian companies. Consequently, it is expected that conclusions made in the paper are going to have a high validation level.

In order to analyse the data and to investigate the developed research hypothesis, the selected statistical methods were used. Except for descriptive statistics methods, primarily used to describe sample characteristics, the following statistical tests were used in the analysis: the hypothesis test for the population proportion, the hypothesis test regarding two population proportions, and the chi-squared test of independence. Due to paper length limitations, the tests were not elaborated in more detail.

4. ANALYSIS AND DISCUSSION

The study focuses on companies that have developed a management accounting information system (MAIS). Therefore, Table 3 shows the structure of companies participating in the survey according to whether they have developed a management accounting information system or not, and according to their size.

Table 3. Developed management accounting information system (MAIS) and the company size

Size of the company	Developed MAIS in the company		Total
	Yes	No	
Micro	42	34	76
Small	82	25	107
Medium	33	0	33
Large	9	0	9
Total	166	59	225

Source: Authors.

According to the results presented in Table 4, it can be concluded that only micro companies have not recognized the importance of a management accounting information system. Namely, at a significance level of 5% only at the micro companies' level, it can be concluded that the null hypothesis that 0.5 or less companies did not develop a management accounting information system cannot be rejected. However, the general conclusion, taking all companies from the sample into account, is that Croatian companies have recognized the importance of using a management accounting information

system. Consequently, more than 50% of them had already implemented that system in their business. Furthermore, the conducted Pearson chi-square statistic test has shown that the variables of the company's size and having developed management accounting information system are not independent and that they are related (Pearson chi-square statistic = 28.85, p-value < 0.0001). Together with proportion tests, the Pearson chi-square statistic test results suggest that larger companies give more attention to the development of a management accounting information system.

Table 4. One-way proportion tests*

Size of the company	Number of companies with developed MAIS	Sample size	Sample proportion	Standard error	Test statistic	p-value
Micro	42	76	0.5526	0.0574	0.92	0.1794
Small	82	107	0.7664	0.0484	5.51	<0.0001
Medium	33	33	1.0000	0.0871	5.74	<0.0001
Large	9	9	1.0000	0.1667	3.00	0.0013
Total	166	225	0.7378	0.0333	7.13	<0.0001

*Null hypothesis is that 0.5 or fewer companies have not developed a management accounting information system (MAIS), as related to the size of the company.

Source: Authors.

Table 5 shows the structure of companies participating in the survey according to whether they have developed a

management accounting information system or not, as well as according to their main business activity.

Table 5. Developed management accounting information system (MAIS) according to the main business activity

Main business activity	Developed MAIS in the company		Total
	Yes	No	
Manufacturing	36	8	44
Trade	35	8	43
Service	81	38	119
Other	14	5	19
Total	166	59	225

Source: Authors.

As opposed to the results observing the size of the company, one-way proportion tests, presented by Table 6, have, at a significance level of 5%, shown that the null hypothesis can be rejected at all observed categories of the main business activities of companies. In other words, more than 50% of companies in each of the observed main business activity categories recognize the

importance of the management accounting information system and use it. The Pearson chi-square statistic test confirmed that the variables of the main business activity and having a developed management accounting information system are independent (Pearson chi-square statistic = 4.77, p-value = 0.1898).

Table 6. One-way proportion tests*

Main activity	Number of companies with developed MAIS	Sample size	Sample proportion	Standard error	Test statistic	p-value
Manufacturing	36	44	0.8182	0.0754	4.22	<0.0001
Trade	35	43	0.8140	0.0762	4.12	<0.0001
Service	81	119	0.6807	0.0458	3.94	<0.0001
Other	14	19	0.7368	0.1147	2.06	0.0195
Total	166	225	0.7378	0.0333	7.13	<0.0001

* The null hypothesis is that 0.5 or fewer companies do not have a developed management accounting information system, as related to their main business activity.

Source: Authors.

Results in Table 7 reveal that management reports are required on a monthly basis in most participating companies (103 or 62.05%). The one-way proportion test shows that at the significance level of 5%, the null hypothesis that companies require management reports more rarely than once

a month can be rejected (sample proportion = 0.6747, standard error = 0.0388, test statistic = 4.50, p-value < 0.0001). Those results lead to the conclusion that companies recognize the importance of management reports and therefore use them often.

Table 7. Frequency of requesting a management report

Frequency of requesting a management report	Number of companies	Percentage (%)	Cumulative percentage
Daily	2	1.20	1.20
Weekly	7	4.22	5.42
Monthly	103	62.05	67.47
Quarterly	33	19.88	87.35
Semi-annually	4	2.41	89.76
Annually	1	0.60	90.36
As needed	16	9.64	100.00
Total	166	100.00	----

Source: Authors.

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Management reports are prepared mostly in the accounting (75.45%), controlling (8.98%), planning and analysis (13.17%) department, or in another department (2.40%). The importance level of management reports for making certain business decisions is examined by using a five-point Likert scale ranging from “Not at all important” (rank 1) to “Extremely important” (rank 5). It has to be emphasized that the

importance level of management reports for making certain business decisions is graded only by those companies (166), which have already developed a management accounting information system. The basic statistical results are provided in Table 8. It has to be emphasized that calculated Cronbach’s alpha of 0.8019 reveals that the score reliability of the scale for the observed eleven business decisions is good.

Table 8. Basic statistical results related to management reports’ significance for business decision-making

Business decision	Sample size	Mean	Standard deviation	Standard error	95% confidence interval of the mean	
					Lower limit	Upper limit
Decision on investment	166	3.78	1.00	0.08	3.62	3.93
Decision on cost management	166	4.54	0.68	0.05	4.43	4.64
Decision on new product development	166	3.64	0.91	0.07	3.50	3.78
Decision on market activities and in relation to competition	166	3.74	0.92	0.07	3.60	3.88
Decision on research and development activities	166	3.33	0.95	0.07	3.19	3.48
Decision on financing	166	4.32	0.72	0.06	4.21	4.43
Decision on rewarding employees	166	4.06	0.75	0.06	3.94	4.18
Decision on resource allocation	165	3.84	0.99	0.08	3.69	3.99
Decision on prices	164	4.09	0.83	0.06	3.96	4.21
Decision in the short-term business plan (master plan)	166	4.04	0.63	0.05	3.94	4.13
Decision on the formulation of overall policies and long-term plans	166	4.00	0.70	0.05	3.89	4.11

Source: Authors.

According to Table 8, management reports are the most important factor when “decisions on cost management” and

“decisions on financing” are considered. On the other hand, the lowest importance of management reports seems to be when

considering the “decisions on research and development activities.”

In order to support the first research hypothesis by using a one-tail statistical test for proportions, an assumption is tested

that more than 50% of companies think that management reports are important or extremely important when the observed business decisions are considered. The results of the conducted test are given in Table 9.

Table 9. One-way proportion tests*

Business decision	Number of companies that consider management reports important for making the stated business decision	Sample size	Sample prop.	Stand. error	Test statistic	p-value
Decision on investment	113	166	0.6807	0.0388	4.66	<0.0001
Decision on cost management	159	166	0.9578	0.0388	11.80	<0.0001
Decision on new product development	103	166	0.6205	0.0388	3.10	0.0010
Decision on market activities and in relation to competition	111	166	0.6687	0.0388	4.35	<0.0001
Decision on research and development activities	79	166	0.4759	0.0388	-0.62	0.7327
Decision on financing	153	166	0.9217	0.0388	10.87	<0.0001
Decision on rewarding employees	137	166	0.8253	0.0388	8.38	<0.0001
Decision on resource allocation	112	165	0.6788	0.0389	4.59	<0.0001
Decision on prices	134	164	0.8171	0.0390	8.12	<0.0001
Decision in the short-term business plan (master plan)	141	166	0.8494	0.0388	9.00	<0.0001
Decision on the formulation of overall policies and long-term plans	135	166	0.8133	0.0388	8.07	<0.0001

* The null hypothesis is that 50% (0.5) or a lower amount of companies considers management reports not important for making the stated business decision.

Source: Authors.

According to the results provided in Table 9, for 10, out of 11 observed business decisions, it can be concluded that, at a significance level of 5%, more than 50% of companies consider management reports important for their business decision-making. Only for “decisions on research and development activities”, the null hypothesis, at a significance level of 5%, cannot be rejected, which implies that more than 50% of companies do not see management reports as useful when this kind of decision is considered. Consequently, based on the provided results, the first research hypothesis of the paper can be accepted, namely that the managers consider management reports as an important basis in decision-making.

Table 10 presents the results for one-way tests for differences in two proportions. Overall, four tests were observed, stated as cases in Table 10. Each test, or case, assumed that the proportion of large companies, which have developed a management accounting information system, is statistically higher than the proportion of companies of a certain size, which have developed a management accounting information system. In this manner, the first case observed large and micro companies, the second case large and small companies, the third case large and medium-sized companies, and the fourth case large companies, compared with micro, small, and medium-sized companies together.

Table 10. One-way tests for differences of proportions*

Cases	Company size	Number of companies with developed MAIS	Sample size	Sample prop.	Difference in two proportions	Stand. error	Test stat.	p-value
Case 1	Large	9	9	1.0000	0.4474	0.0570	2.59	0.0048
	Micro	42	76	0.5526				
Case 2	Large	9	9	1.0000	0.2336	0.0409	1.64	0.0508
	Small	82	107	0.7664				
Case 3	Large	9	9	1.0000	0.0000	-----	-----	-----
	Medium	33	33	1.0000				
Case 4	Large	9	9	1.0000	0.2731	0.0303	1.8300	0.0340
	Micro, small and medium	157	216	0.7269				

* Null hypothesis is that the first proportion of companies which have developed management accounting information system (MAIS) is equal or lower than the second one – size of the company.

Source: Authors.

The results of the first case show that, at a significance level of 5%, the null hypothesis can be rejected. This leads to the conclusion that the proportion of large companies that have developed a management accounting information system is significantly higher than the proportion of micro companies that have developed a

management accounting information system. If the second case is observed, where the proportion of large and small companies that have developed a management accounting information system are compared, the same conclusion can be made but on a significance level of 10%. It is not possible to make a direct comparison between large

and medium-sized companies because of no data variation or non-existence of large and medium-sized companies, which have not developed a management accounting information system in the sample. However, in the fourth case, the proportion of large companies that have developed a management accounting information system is compared with the proportion of micro, small, and medium-sized companies that have developed a management accounting information system. In that case, it was possible to draw a conclusion. In Case 4, at a significance level of 5%, the null hypothesis can be rejected and the conclusion is that large companies use management reports more than micro, small, and medium-sized companies do. However, the conclusion has to be made with caution because of sample characteristics. Namely, the main drawback of these analyses could be the fact that only nine large companies participated in the survey. It would be possible to draw more reliable and powerful conclusions if the number of large companies in the sample was larger and there was some data variation. However, statistical results lead to the conclusion that the second research hypothesis, namely that managers in large companies use management reports to a greater extent in decision-making than managers in micro, small, and medium-sized companies, can be accepted.

5. CONCLUSION

The business environment is characterized by constant change. Globalization and erosion of barriers in trade have led to the emergence of global product markets, supply of products and services is significantly high, competition is strong, product life cycle is reduced, and information technology has accelerated the digitalization of all business processes. In order to survive and

be competitive in an ever-changing market while maintaining a satisfactory level of profitability, a company has to establish a sound practice of management accounting. Therefore, every company should develop a management accounting information system, use management reports to make operational, tactical, and strategic business decisions. The role of a management accountant is to prepare high-quality and relevant information for the management to make effective business decisions. The importance of management accounting and management reports is reflected in the fact that it generates information that is relevant for the decision-making process.

The research results have shown that many micro and small companies have developed a management accounting information system, whereas all medium and large companies seem to have developed it. A detailed analysis of the conducted web survey has confirmed that managers consider management reports an important basis in decision-making; therefore, the first research hypothesis of the paper is accepted. Furthermore, the analysis results have shown that managers in large companies use management reports in decision-making to a greater extent than managers in micro, small, and medium-sized companies. Those results lead to the acceptance of the second research hypothesis. However, that conclusion should be considered with caution due to sample structure limitations.

In that sense, the main limitations of the paper are related to the sample. Namely, more effort should be invested to acquire more responses from large companies. In addition, the approach of probability proportional to size regarding the sampling of companies should be applied in further research.

This research focuses on the use of management accounting information, primarily

financial information, in the process of decision-making. Future research should widen the research area and investigate the use of financial and non-financial (internal and external) management information in making operational, tactical, and strategic business decisions.

REFERENCES

1. NN. (2015). Official Gazette, (78/15), 47 20.
2. Adeoti-Adekeye, W. B. (1997). The importance of management information systems. *Library Review*, 46(5), 318–327.
3. Alawattage, C., Hopper, T., & Wickramasinghe, D. (2007). Introduction to management accounting in less developed countries. *Journal of Accounting & Organizational Change*, 3(3), 183–191.
4. Arbnor, I., & Bjerke, B. (2009). *Methodology for Creating Business Knowledge*. Thousand Oaks, California: Sage Publications Inc.
5. Arsov, S., & Bucevska, V. (2017). Determinants of transparency and disclosure – evidence from post-transition economies. *Economic Research-Ekonomska Istraživanja*, 30(1), 745–760.
6. Burritt, R. L., & Saka, C. (2006). Environmental management accounting applications and eco-efficiency: Case studies from Japan. *Journal of Cleaner Production*, 14(14), 1262–1275.
7. Chenhall, R. H., & Morris, D. (1986). The impact of structure, environment, and interdependence on the perceived usefulness of management accounting systems. *Accounting Review*, 61(1), 16–35.
8. Dmitrović-Šaponja, L. & Suljović, E. (2017). Strategic management accounting in the Republic of Serbia, *Economic Research-Ekonomska istraživanja* 30(1).
9. Dobroszek, J., Zarzycka, E., Almasan, A., & Circa, C. (2019). Managers' perception of the management accounting information system in transition countries. *Economic Research-Ekonomska Istraživanja*, 32(1), 2798–2817.
10. Drury, C. (2015). *Management and Cost Accounting* (Ninth Edition). Cengage Learning EMEA, Hampshire, United Kingdom.
11. Duh, R., Hsu, A. W., & Chow, C. W. (2014). World-class manufacturing, management accountants' cross-functional participation, and firm performance. *Asia-Pacific Journal of Accounting & Economics*, 21(3), 262–283.
12. Eierle, B., & Schultze, W. (2013). The role of management as a user of accounting information: Implications for standard setting. *Accounting and Management Information Systems*, 12(2), 155–189.
13. Glavan, M. E., Braescu, M., Dumitru, V., Jinga, G., & Laptés, R. (2007). The relevance and quality of the accounting information in the managerial decisions. *Accounting and Management Information Systems*, 6(Supplement), 103–115.
14. Granlund, M., & Lukka, K. (1998a). It's a small world of management accounting practices. *Journal of Management Accounting Research*, 10, 153–179.
15. Granlund, M., & Lukka, K. (1998b). Towards increasing business orientation: Finnish management accountants in a changing cultural context.

- Management Accounting Research*, 9(2), 185–211.
16. Haldma, T., & Lääts, K. (2002). Contingencies influencing the management accounting practices of Estonian manufacturing companies. *Management Accounting Research*, 13(4), 379–400.
 17. Hall, M. (2010). Accounting information and managerial work, *Accounting, Organizations and Society*, 35(3), 301–315.
 18. Heinzlmann, R. (2016). Comparing Professions in UK and German-Speaking Management Accounting. *Accounting in Europe*, 13(1), 103–120.
 19. Hladika, M. (2015). Zastupljenost računovodstvene profesije u menadžerskim strukturama i njezina uloga u ostvarivanju ciljeva poduzeća (Engagement of accounting profession in management structure and its role in achievement of company's objectives). *Zbornik Radova Ekonomskog fakulteta u Mostaru (Journal of Economy and Business)* – Special Issue, II, 46–68.
 20. Jinga, G., Dumitru, M., Dumitrana, M., & Vulpoi, M. (2011). Accounting systems for cost management used in the Romanian economic entities. *International Journal of Accounting & Information Management*, 19(2).
 21. Lääts, K., & Haldma, T. (2012). Changes in the scope of management accounting systems in the dynamic economic context. *Economics and Management*, 17(2), 441–447.
 22. Libby, T., & Waterhouse, J. H. (1996). Predicting change in management accounting systems. *Journal of Management Accounting Research*, 8, 137–150.
 23. NN (2008). Definition of Management Accounting. Retrieved from <https://www.imanet.org/-/media/6c984e4d7c854c2fb40b96bfb991884.ashx?as=1&mh=200&mw=200&hash=4E6AF697C021AA3EB0C358AE6FE2AEB1BCA992DE>
 24. Martin, M. J. (2019). How often are internal managerial reports communicated? Retrieved from <https://smallbusiness.chron.com/internal-managerial-reports-communicated-36145.html>
 25. McGregor, L. (2001). Improving the quality and speed of decision making. *Journal of Change Management*, 2(4), 344–356.
 26. Mia, L., & Chenhall, R. H. (1994). The usefulness of management accounting systems, functional differentiation and managerial effectiveness, *Accounting, Organizations and Society*, 19(1), 1–13.
 27. Napitupulu, I. H. (2015). Antecedence of user satisfaction in management accounting information systems quality: User involvement and user competency (Survey of Indonesia manufacture company managers). *International Journal of Applied Business and Economic Research*, 13(2), 561–577.
 28. Nielsen, L. B., Mitchell, F., & Nørreklit, H. (2015). Management accounting and decision making: Two case studies of outsourcing. *Accounting Forum*, 39(1), 64–82.
 29. Petera, P., & Šoljaková, L. (2020). Use of strategic management accounting techniques by companies in the Czech Republic. *Economic Research-Ekonomska Istraživanja*, 33(1), 46–67.
 30. Proctor, R. (2012). *Managerial Accounting – Decision Making and Performance Management* (Fourth Ed.). London, England: Pearson.
 31. P.W.C. (2008). Management information and performance: CFOs face new

- demands for high-quality data that drives decisions. CFO Europe Research Services.
32. Saukkonen, N., Laine, T., & Suomala, P. (2018). Utilizing management accounting information for decision-making: Limitations stemming from the process structure and the actors involved. *Qualitative Research in Accounting & Management*, 15(2), 181–205.
33. Thyssen, J., Israelsen, P., & Jørgensen, B. (2006). Activity-based costing as a method for assessing the economics of modularization – a case study and beyond. *International Journal of Production Economics*, 103(1), 252–270.
34. Tillema, S. (2005). Towards an integrated contingency framework for MAS sophistication: Case studies on the scope of accounting instruments in Dutch power and gas companies. *Management Accounting Research*, 16(1), 101–129.
35. Trenca, M., & Nørreklit, H. (2017). *Actor-based performance management* (H. Nørreklit, Ed.). New York: Routledge.
36. *Upravljačko računovodstvo* (Management Accounting). (2011). In Hrvatska zajednica računovođa i financijskih djelatnika. Zagreb.
37. Vámosi, T. S. (2000). Continuity and change; management accounting during processes of transition. *Management Accounting Research*, 11(1), 27–63.
38. Wouters, M., & Verdaasdonk, P. (2002). Supporting Management Decisions with ex ante Accounting Information. *European Management Journal*, 20(1), 82–94.

ANALIZA RAZINE KORIŠTENJA MENADŽERSKIH IZVJEŠĆA NA ODLUČIVANJE U HRVATSKIM PODUZEĆIMA

Sažetak

Učinkovite poslovne odluke imaju pozitivan utjecaj na sveukupno poslovanje poduzeća. Svaka bi poslovna odluka trebala biti zasnovana na relevantnim, visoko kvalitetnim i pouzdanim informacijama, pripremljenim od strane menadžerskih računovođa, u skladu sa specifičnim menadžerskim zahtjevima. Kako bi poduprla učinkovito odlučivanje, informacije menadžerskog računovodstva trebaju biti odgovarajuće za konkretnu poslovnu odluku, ali i održavati ulogu, odgovornost te vrijednost koju imaju za menadžera, koji sudjeluje u odlučivanju. U ovom se radu istražuje u kojoj je mjeri u hrvatskim poduzećima razvijen menadžerski računovodstveni informacijski sustav. Kako bi se prikupili podaci za analizu, provedena je anketa putem weba, na reprezentativnom uzorku hrvatskih poduzeća. Ukupno je u anketi učestvovalo 225 poduzeća iz realnog sektora. Rezultati pokazuju da menadžeri smatraju menadžerska izvješća značajnim temeljem za odlučivanje. Nadalje, rezultati su rada pokazali i da menadžeri u velikim poduzećima više koriste menadžerska izvješća u odlučivanju od menadžera mikro, malih i srednjih poduzeća.

Ključne riječi: *menadžerski računovodstveni informacijski sustav, informacije menadžerskog računovodstva, menadžerska izvješća, poslovno odlučivanje, Hrvatska*