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THE USE OF PUBLIC SECTOR REPORTS BY PUBLIC MANAGERS – SOME EARLY EVIDENCE FROM CROATIA

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ABSTRACT

This paper analyses the use of prescribed financial reports and budget execution reports from internal users' point of view. Internal users such as public managers are often faced with dual reporting systems, reporting on budgets and reporting using financial reports. In previous research different factors have been found to affect the use of reports in public sector. Some authors called for more research in the context of public sector and the investigation of public sector reports use drivers. This paper attempts to answer the call to fill this gap by investigating if factors such as user's current position and personal characteristics are associated with the use of financial reports with or in preference to budget execution reports. Public managers in Croatia were contacted from February to April 2022 and surveyed. Findings in this paper show that public managers often use reports that provide information about financial performance rather than the balance sheet and that their preference is to use reports mostly prepared on cash basis. In addition, public managers prefer to use budget execution reports rather than financial reports. These results also show that some managers' personal characteristics are associated with the use of public sector reports. As public sector managers are important internal users of financial reports, it is important to understand if and how they use financial reports. Understanding what the key drivers and influences are in their use of such reports and whether some further changes are required are equally important to standards setters.

1. INTRODUCTION

The main role of financial reports is to provide information about financial position, financial performance and cash flows. In addition, financial reports in public sector should provide additional information related to specific characteristics of public sector operations. Previous studies showed that reports prepared on accrual bases provide comparable, reliable, and transparent information needed to improve accountability of public sector managers. Although financial reports are important for decision making process, previous studies showed that budget reports are preferred over the prescribed financial reports (Brusca, 1997; Brusca & Montesinos 2013; Kobayashi *et al.*, 2016).

In the last decade a number of studies regarding the use of information disclosed in financial reports have been published in academic journals, however Van Helden (2016) emphasized that this area of research is still unresearched and has called for academics to do more research in the field of use and usefulness of financial reports by different categories of information users, including public sector ones.

Brusca (1997) stated that public managers are the most important internal users of financial reports produced by public sector entities. Previous conducted studies related to public managers had been mostly focused on usefulness of financial reports or financial and non-financial information, rather than real usage of those reports.

Those studies were also mostly conducted on local government level (Askim, 2007; Liguori *et al.*, 2012, 2014; Ter Bogt, 2004). Moreover, these studies were, in general, conducted after public sector reforms were finished. Namely, economic pressures and growing demand for public services have led governments to undertake significant reforms over the past 40 years to increase levels of efficiency and effectiveness. The reforms took place within the framework of the New Public Management doctrine. The main features of the new management system were (Hood, 1991; Pollit, 1990):

- a) Separation of political and managerial responsibilities
- b) Shifting forms of management from processes to outcomes and focusing on outputs rather than inputs
- c) Emphasis on cost reduction and efficiency improvement
- d) Use of corporate sector tools
- e) Greater competition
- f) Citizen orientation.

With the adoption of the doctrine of New Public Management, the role and the way of managing public sector entities changed and market mechanisms were introduced. In this new context, the problem of the lack of useful information for managers emerged and accounting systems had to evolve to achieve these objectives (Ruiz, 2000). As a result, significant progress was made in the accounting of public entities in most countries. The changes introduced were aimed at improving existing accounting information systems. One of the most important initiatives was the introduction of accrual accounting, and in some countries even accrual budgeting was introduced (Bruno, 2021). Generally, the analysis centred around whether changes occurred in terms of improved transparency and accountability following the implementation of accrual accounting.

In Croatia prescribed financial reports are prepared under modified accrual accounting base, indicating that Croatia is in the transitioning phase towards implementing full accrual accounting base. Previous research conducted in Croatia shows that public managers perceive those financial reports as not useful for decision making process and that those reports are prepared just as part of compliance with laws and regulations, without regard for their actual use or usefulness (Hladika, 2014).

As Van Helden (2016) stated, there are significant differences in research results according to whether usefulness or real usage of reports had been studied. Therefore, the intention of our paper is to investigate if and to what extent public managers use prescribed financial reports and which types of financial reports they preferred the most. As Nogueira *et al.* (2013) stated, prior literature focused on the usefulness of financial reporting for management purposes is not extensive, so our paper fulfils the gap on the real usage of financial reports by public managers. Since Croatian public sector entities use dual reporting system, the intention of this paper is also

to investigate whether public sector managers prefer to use financial reports over budget execution reports. Previous studies (Anessi-Pessina & Sicilia, 2020; Askim, 2007; Brusca, 1997; Faber & Budding, 2022; Sinervo & Haapala, 2019; Yamamoto, 2008) showed that different user roles as well as personal characteristics of users are associated with the use and the perception of the usefulness of prescribed financial reports in public sector, we further explore if such characteristics and the users' position by public managers are associated with the use of financial reports or with the use of budget execution reports.

This paper is divided into five sections. After introduction, the paper starts by presenting main characteristics of public sector accounting, budgeting and financial reporting in Croatia followed by reviewing existing literature on the reporting system and usage of accounting information by public managers. The sections after present research results. The final section contains conclusions, limitations of the study and suggestions for future research.

2. THE MAIN CHARACTERISTICS OF PUBLIC SECTOR REPORTING IN CROATIA

In Croatia, the Budget Act¹ (Official Gazette 144/21) governs planning, preparing, adoption and budget execution, asset and debt management, public debt management, borrowing and issuance of guarantees by State, local and regional governments, budgetary relationships in the public sector, accounting, budget oversight and other matters related to public finance management. According to that law, public sector consists of the central state budget, the budgets of local and regional self-government units, budgetary and extra budgetary users – group I and group II. Prescribed definitions enable to determine which units are extra budgetary i.e., budgetary users, so the Register of Budgetary Users and Extra-budgetary Users are established. According to that Register, budgetary users are ministries, other state administration bodies (agencies, regulatory bodies), public universities, public hospitals, social welfare, and culture while local and regional self-government budget users are primary and secondary schools, foster-care facilities, student accommodations, social service centres, public fire brigades, health institutions, cultural institutions, day-care centres and other.

The Budget Act regulates the budget process relating to budget formulation, adoption, budget execution and supervision of the budget. The formal structure of the budget at all levels is based on the same legislation, hence the reports are suitable and comparable for consolidation. Reporting on budget execution is carried out through the preparation of semi-annual and annual budget execution reports. These reports are based on cash accounting base. On the other hand, the Croatian accounting framework

1 https://narodne-novine.nn.hr/clanci/sluzbeni/full/2021_12_144_2457.html (accessed: 16 November 2022)

prescribes the shape and content of all financial reports, obligations and submissions deadlines in public sector. Financial reports are prepared under modified accrual accounting basis. Ordinance on Financial Reporting in Budgetary Accounting (Official Gazette 37/22)² defines financial reports that public sector entities are required to prepare: Balance Sheet, Report on Revenue, Expenses, Receipts and Expenditures, Report on Expenditures According to Functional Classification, Report of Changes in the Value and Volume of Assets and Liabilities and Notes. In general, reporting in the Croatian public sector is extensive and complex, as there is a dual reporting system. On the one hand, there are reports on budget execution, and on the other hand, financial reports are required. Differences in the application of the accounting basis in the preparation of the two types of reports lead to the complexity of the system, and the application of the dual system itself affects the ability to compare budgetary information and accounting information. The existence of differences leads to misunderstandings and a lack of transparency in reporting, which ultimately affects the use of the reports.

3. LITERATURE REVIEW

Public managers need quality information for making decisions so to efficient manage public resources and improve accountability and transparency. There are however various types of reporting in public sector: statistical, budgetary and financial reporting. While statistical reporting refers to macro level of country's reporting, financial and budgetary reporting refer to micro level of reporting by public sector entities. Budget is the main tool for control of spending and allocation of public resources (IPSASB, 2014). Literature suggests that one of the main tools to assess accountability in public sector is through disclosure of information in financial reports (Ezzamel *et al.*, 2004; Ryan *et al.*, 2002). Financial reports provide information on whether public sector entities meet financial objectives defined in their budgets.

Scope and quality of information presented in financial reports of public sector entities depends on the application of the accounting base. Many countries around the world had gone through a process of transitioning from traditional cash accounting to accrual accounting (IFAC 2018, 2021; Moretti, 2016). Although many academics and professionals agree that public sector should implement accrual accounting in order to prepare financial reports and budgetary reports there still some academics who criticise accrual accounting in public sector (Barton, 2007). This is because different countries have different capacities and preconditions for implementation of accrual accounting. The implementation of accrual accounting is considered to complicate the understanding of the presented information, potentially affecting its usefulness and practical application.

2 https://narodne-novine.nn.hr/clanci/sluzbeni/2022_03_37_443.html (accessed: 05 November 2022)

Previous studies also showed that in many countries budget and budgetary reports are generally based on cash or modified cash basis (Moretti, 2016). Therefore, there seems to be a dual reporting system in a number of countries where budgets and budgetary reports are prepared under cash accounting basis, while financial reports are prepared on accrual accounting basis or modified accrual basis. Studies of such dual systems show that financial reports prepared under accrual accounting base have secondary role or use while budgets play the key role in decision making process and assessment of accountability in public sector (Tiron-Tudor *et al.*, 2020).

3.1. Use of accounting information by public managers

The fact that budgets are preferred to be used over financial reports, as well as implementation of public sector financial reporting based on accruals influenced researchers to analyse the usage and usefulness of financial reports by public managers. In New Zealand, Coy *et al.* (1997) tried to identify users of annual reports of higher education institutions. Their study showed that managers were the most common group of users. Brusca (1997) also believed that public managers are the main internal users of financial reports and analysed usefulness of financial reports by Spanish municipalities used by financial directors and public managers. Brusca concluded that although financial reporting was evaluated as useful, presented information was often not fully utilized. That study also showed that financial directors favoured more the budgetary reports than financial reports. Sixteen years later, Brusca & Montesions (2013) researched the usefulness of financial information after accrual accounting basis was adopted by Spanish local authorities in parallel with Spanish budgets being prepared on modified cash bases. The results of their research show that financial directors on local levels considered budgetary reporting as most useful because it enabled control of expenditure that was based on budgets.

Kobayashi *et al.* (2016) emphasized that although Japanese local units operated under dual reporting system including cash accounting and accrual accounting, information based on accrual accounting had been rarely used for making decisions. Anessi-Pessina & Steccolini (2007) researched the dual reporting system in Italian local municipalities, where budgetary cash accounting coexisted with the new accrual accounting system and they found out that dual reporting system did not give satisfactory results for users. Mir *et al.* (2019), by researching the implementation of mandatory dual reporting system by Indonesian local government, reported that most important report for internal decision making in that setting had been a budget realisation report. In contrast to that previous research, Nogueira *et al.* (2013) researched usefulness of financial reports for managers and their decision-making purposes and concluded that respondents had considered information presented and prepared on accrual bases more useful than budgetary information.

3.2. Factors that affect the use of public sector reports

According to Van Helden & Reichard (2019) information is useful if it meets public managers' needs and if it leads to real use. However, different factors can affect the usefulness and real use of accounting information disclosed in financial reports and budget execution reports. Studies conducted recently show that role of politicians and some of their personal characteristics are associated with the use of accounting information. In private sector Hambrick & Mason (1984) developed the Upper Echelon Theory (UET) and stated that personal characteristics of managers affect the way they are making strategic decisions. This theory was also used in public sector research by Faber & Budding (2022) in order to assess if politicians' roles affect the use of the accounting information. Faber & Budding (2022) concluded that the politicians' role is a driver that affects the use of accounting information i.e., politicians who were active in the executive roles used accounting information more than politicians who were active in the legislative roles. Besides the politicians' role, the same authors examined if some personal characteristics, such as age and experience are associated with the use of accounting information. The study of Faber & Budding (2022) shows that younger politicians used more accounting information than older politician. In exploring the association between usage and experience, they found U-curve relationship: recently elected and very experienced politicians had high use, while the use was lowest for politicians with around seven years of parliamentary experience.

Previous studies explored if personal characteristics such as educational background and experience were associated with the use or usefulness of accounting information (Anessi-Pessina & Sicilia, 2020; Askim, 2007; Brusca, 1997; Sinervo & Haapala, 2019; Yamamoto, 2008) and results of those studies vary. Brusca (1997) provided evidence that the stakeholders who had training in the area of management attribute greater usefulness to the information disclosed in financial reports, while Yamamoto (2008) found that experience was positively associated with the usefulness of municipal financial reporting. Askim (2007) showed that the use of performance information by politicians increased with the length of their political experience. Sinervo & Haapala (2019) provided conflicting results. Anessi-Pessina and Sicilia (2020) researched whether the individual characteristics of managers affect the extent of accounting manipulations and, among other characteristics, observed the effects of gender difference. They concluded that women are more inclined towards risk and ambiguity and are less inclined towards unethical behaviour than men are.

4. RESEARCH DESIGN AND METHODOLOGY

Reviewing the previous literature, it is possible to highlight that previously conducted studies mostly show that greater importance has been given to budget execution reports by managers and other internal users. Considering that in Croatia there is the

dual reporting system, and fact that previous conducted studies showed that budget execution reports are favoured (Poljašević *et al.*, 2021), the aim of this research is to determine whether public managers not only prepare required reports but also use financial reports for making their decisions and to what extent they prefer to use budget execution reports over financial reports in their decision making.

In accordance with this aim, the primary goal of this paper is to provide answers to the following research questions:

RQ1: Do public sector managers use the financial reports in making decisions?

RQ2: Do public sector managers use budget execution reports rather than financial reports in making their decisions?

Following previous studies where different factors have been recognized as drivers that affect the use of public sector reports, our paper applied similar to Faber and Budding UET theory to research if current position is key driver that affects way of using financial reports and budget execution reports. As UET theory stated that managers' personal characteristics affect the way they act and make decisions, in our paper we use UET theory to explore if personal characteristics (gender, experience at the position, field of education, perceived knowledge in the field of public sector accounting) have impact on the use of reports in public sector. For the purpose of our paper we modified UET theory. Differences from the original UET framework is that UET theory primarily researched influence of personal characteristics on strategic choices, while in this paper looks at the effect on use of reports of public sector entities. Moreover, the UET theory is focused on public managers in private sector, while for purpose of this paper we are focused on public managers in public sector.

RQ3: Does public managers' current position play the role in the use of financial reports and budget execution reports?

RQ4: Are public managers' personal characteristics associated with the use of financial reports and budget execution reports?

Our research was conducted using a questionnaire prepared for the purpose of the project titled: "Challenges of financial and non-financial reporting by public sector entities in the changing user needs environment". For the purposes of this paper, we use answers from just a few questions from that questionnaire related to financial reporting and personal characteristics of the respondents. In terms of design, the questionnaire is based on Likert scale to evaluate the use of each financial reports, the questionnaire also contains some closed-ended questions to see if public managers were familiar with reports in public sector and if they used financial reports in general. Closed-ended questions referred to personal characteristics too. The survey

was administrated by a specialized market research agency. Public managers were contacted by telephone and surveyed over the telephone. This research was conducted from February to April 2022.

Nogueira *et al.* (2013) stated that previous similar studies focused on internal users but did not make a distinction between politicians and managers. The previous studies focused on internal users who are involved with the legislative bodies and who are councillors. Focus of our study is different, it is focused on members of executive bodies, such as members of government, executives on different level. Therefore, for the purpose of the research in this paper, we define that public sector managers are members of Croatian government, executive authority on the county level (prefect of counties and their deputies), or members of executive authority on the local level (mayors of cities and municipalities and their deputies), or heads of central government budget users and heads of local and regional self-government budget users. These participants have two roles, they are all politicians, and they have executive roles. Although they are all politicians, their primary role is an executive role, therefore they are called public managers and are deemed to be users of information produced by public sector entities in their executive decision making. The data base of these public managers was created by authors from publicly available sources i.e. the websites of the Government of the Republic of Croatia, counties and units of local and regional self-government, data from the State Electoral Commission and the Register of Budgetary and Extrabudgetary Users of the Ministry of Finance (Official Gazette 54/21). For the purpose of the project, it was decided to collect 500 responses from public managers. We took into account the regional representation of all categories of respondents. In order to obtain 500 responses from public managers, 1225 public managers were randomly contacted and 511 responses were collected, i.e. the response rate was 41.71%. The reason for collecting slightly more than 500 responses per group of respondents was to achieve regional representation of all categories of respondents, and there are small discrepancies between the target and the achieved rate by clusters, i.e. regional representation that are presented in Table 1. Sample size test was performed. At a confidence level of 95%, and margin of error of 5% the ideal sample size was calculated on 351 respondents. But as for the purpose of the project was decided to collect 500 responses from public managers, we observed all collected answers.

Table 1. Definition of sample size

	Population	Share of the population	Target quota	Achieved quota	Deviation
Member of government	16	0,41%	2	2	0
Executives on regional level					
Prefect	21	0,53%	3	3	0
Deputy prefect	38	0,96%	5	6	1
Executives on local level					
Major	127	3,22%	16	16	0
Deputy major	89	2,26%	11	11	0
Major of municipality	428	10,86%	54	58	4
Deputy major of municipality	56	1,42%	7	7	0
Heads of central government budgetary users	589	14,94%	75	59	-16
Heads of local and regional self-government budgetary users	2578	65,40%	327	349	22
Total	3942	1	500	511	11

Source: Author's elaboration

Personal characteristics of public managers are presented in Table 2. Majority of respondents are male (62%) and more than two-thirds of respondents possess a qualification of master's degree. More than two-thirds of respondents have education in social sciences other than economics. Although only 12% of respondents have education in economics, 72% of respondents evaluated their knowledge in the field of public sector accounting as sufficient. More than two-thirds of respondents hold roles of heads of local and regional self-government budget users. About one-third of respondents have been in their current position from 1 to 5 years.

Table 2. Personal characteristics of public managers

1. Gender		2. Knowledge in the field of PSA³		3. Field of education	
Male	62%	Minimum	20%	Economics – accounting	3%
Female	38%	Sufficient	72%	Economics	9%
		Expert	4%	Social sciences (other than economics)	62%
		Can't evaluate	4%	Other fields of science	26%
4. Education		5. Current position		6. Experience at the position	
High school	5%	Member of government	0.4%	Less than 1 year	13%
Bachelor's degree	8%	Prefect	0.4%	1 to 5 years	34%
Master's degree	67%	Deputy prefect	1.2%	6 to 10 years	25%
Postgraduate specialist studies	7%	Major	3.1%	11 to 15 years	12%
Master of science	8%	Deputy major	2.0%	More than 15 years	16%
PhD	5%	Major of municipality	11.2%		
		Deputy major of municipality	1.0%		
		Heads of central government budget users	11.7%		
		Heads of local and regional self-government budget users	68.9%		

Source: Author's elaboration

The results are analysed by use of descriptive statistics and inferential statistics. Descriptive statistics include mean and standard deviation measures. The inferential analysis to analyse the effects of public managers' personal characteristics on the use of financial reports and budget execution reports consist of the application the Pearson chi-square. In order to investigate whether public managers' current position plays a role in the use of financial reports and budget execution reports the analysis of variance (ANOVA) is used.

4.1. Do public sector managers use the financial reports in making decisions?

The first research question is posed in order to investigate whether public sector managers use prescribed financial reports in making decisions. To gain answers to this question, we first asked public managers if they are familiar with prescribed financial reports and budget execution reports. Results in Table 3. shows that public managers are mostly familiar with prescribed financial reports (93.7%) as well as with budget execution reports (93.2%). Then we asked public managers if they use financial reports. They had option to choose 1 if they never used them; 2 if they sometimes used them and 3 if they often used financial reports. From 511 surveyed public managers, just 22 answered that they never used financial reports. Given that answer, those respondents were excluded from further questions and research. Consequently, answers by the remaining 489 public managers were collected and analysed. Moreover, results in table 3. shows that 96% of respondents answered that they use prescribed financial reports. From those who had used financial reports, 40.1% answered that they sometimes use financial reports while 59.9% answered that they often use financial reports. Respondents were also asked to state the reasons for using financial reports. The reason for the use ranked in the first place was: *as a support in making financial decisions* i.e., 152 public managers (31%) considered that as most important reason. That finding is consistent with findings by Van Helden and Reichard (2019) who emphasized that two main functions of accounting information in public sector are accountability and providing support in decision making process. The findings in our study are however, contrary to Hladika (2014) who reported that public managers prepare financial reports for mainly compliance with regulations and laws purposes rather than decision making.

Table 3. Familiarity with reports in public sector and frequency of their use

	Familiar with financial reports		Familiar with budget execution reports			Use of financial reports – all public managers			Use of financial reports – public managers who used financial reports	
	Frequency	Percent	Frequency	Percent		Frequency	Percent		Frequency	Percent
Yes	479	93.7	476	93.2	Never	22	4.3	Sometimes	196	40.1
No	32	6.3	35	6.8	Sometimes	196	38.4	Often	293	59.9
Total	511	100	511	100	Often	293	57.3	Total	489	100
Total						511	100			

Source: Author's elaboration

4.2. Usage of prescribed financial reports and budget execution reports

Prior research in the public sector based on studies involving public managers, indicates that budget execution reports are utilized more extensively than financial reports. Therefore, the second research question in this paper addresses the preference of use of budget execution reports over financial reports by public sector managers. Respondents were asked to rank on Likert scale from 1 (never use) to 5 (often use) which prescribed financial reports and budget execution reports they use. Table 4. shows that public managers often used Report on revenue, expenses, receipts and expenditures in which revenue and expenses are recognized on modified accrual basis. Second ranked are the Report on liabilities, Report on expenditures according to functional classification as well as Notes while sometimes used Balance Sheet and Report of changes in the value and volume of assets and liabilities. Results also show that public managers often use Annual and Semi-annual budget execution reports. Therefore, public sector managers seem to prefer to use budget execution reports over the financial reports. The exception is the Report on revenue, expenses, receipts and expenditures. Public sector managers often used both of those reports. The Report on revenue, expenses, receipts, and expenditures combines recognition of revenues and expenses on accrual and cash basis. This is because in recognition of revenues and expenses modified accrual base is implemented (i.e., revenue are recognized when cash flow happens, while expenses are recognized when they occur), while in the recognition of receipts and expenditures the cash base is implemented. From these results it is evident that public sector managers in Croatia are mostly oriented towards financial performance of public sector entities and not so much on reported public sector assets.

Table 4. Usage of prescribed financial reports and budget execution reports

Reports	Mean	Standard Deviation
Balance sheet	3.64	1.142
Report on revenue, expenses, receipts, and expenditures	4.19	0.865
Report on expenditures according to functional classification	3.88	1.020
Report of changes in the value and volume of assets and liabilities	3.44	1.098
Report on liabilities	3.93	0.996
Notes	3.79	1.030
Annual budget execution report	4.17	0.881
Semi-annual budget execution report	4.09	0.931

Source: Author's elaboration

These results are consistent with findings in other studies (Brusca, 1997; Brusca & Montesinos, 2013; Liguori *et al.*, 2014) which show that public managers highly rate budget execution reports and that they prefer budgetary reports over financial reports. The results in this study are also consistent with findings of Kobayashi *et al.* (2016) who emphasize that although local units in Japan implemented dual reporting system, information based on accrual accounting was rarely used. The situation in Croatia is similar. Although there is dual reporting system present, public managers still prefer to use budget execution reports more than prescribed financial reports prepared under modified accrual base. Research results confirm the fact that financial reports prepared on accrual base as well as on modified accrual base have a secondary role and that budgetary reports still play the main role in decision making process by public managers (Tiron-Tudor *et al.*, 2020). Although the results are in line with previously conducted research, the question still arises as to why budget execution reports are preferred over financial reports.

4.3. Does public sector managers' current position play a role in the use of financial reports and budget execution reports?

Previous studies reported that the role of politicians is associated with the use of accounting information, i.e., politicians in the executive branch roles use more accounting information than politicians in the legislative branch roles. In our study, we define that politicians in the executive branch are also public sector managers with different positions in public sector entities. They are generally members of government, heads of counties, cities and municipalities, deputies, and heads of public sector entities. In accordance with the Upper Echelon Theory, we analyse if public managers' current position plays a role in the use of financial reports and budget execution reports. From the results in this study, it can be concluded that all public managers mostly use Report on revenue, expenses, receipts, and expenditures. However, managers in different position often or mostly use Report on revenue, expenses, receipts, and expenditures. This is with the exception of deputy majors of cities and municipalities who sometimes use prescribed financial reports. In addition, they mostly and/or sometimes use Report on liabilities and Report on expenditures according to functional classification. Finally, almost all public managers rarely use Balance sheet and Report of changes in the value and volume of assets and liabilities. The results also show that deputy majors of cities and municipalities use the prescribed financial reports the least. We conducted addition analyses using ANOVA in order to investigate whether public managers' position plays a role in the use of prescribed financial and budget execution reports. This analysis is used to investigate the significant difference in use of these reports according to public managers' current positions. Table 5. shows that at the significance level of 5% we reject the null hypothesis. That is there are significant differences in the use of Balance sheet, Report

on changes in the value and volume of assets and liabilities and Notes with respect to the position of public managers. Overall, deputy mayors use prescribed reports less than other managers. These results are contrary to Yamamoto (2008) who found that members of government on central level are less likely to use financial information compared to members on the local level. Therefore, in answering the third research question, we can conclude that some public sector managers' positions are associated with the use of reports in Croatian public sector. It also appears that public managers who are not in the leading position when making decisions i.e., deputies of executives, are less likely to use financial reports. Based on these results we cannot completely confirm the Upper Echelon Theory relevance to this study. This is because there are significant differences in use but just of some financial reports, while in the case of budget execution reports there are no significant differences at all, regardless of the managers' roles and positions.

Table 5. Difference in use of prescribed financial reports according to public managers' position

ANOVA		
Reports	F	Sig. (p-value)
Balance sheet	2.64	0.008
Report on revenues, expenses, receipts, and expenditures	1.49	0.158
Report on expenditures according to functional classification	1.952	0.051
Report of changes in the value and volume of assets and liabilities	2.459	0.013
Report on liabilities	1.291	0.246
Notes	4.044	0.000
Annual budget execution report	0.640	0.744
Semi-annual budget execution report	0.597	0.781

Source: Author's elaboration

4.4. Are public managers' personal characteristics associated with the use of financial reports and budget execution reports?

According to UET theory and as previous studies showed that personal characteristics of respondents are associated with the use of accounting information, the fourth research question in this study addresses the issue as to whether public sector managers' personal characteristics i.e., gender, experience at the position, field of education and perceived knowledge in the field of public sector accounting, are associated with the use of financial reports and budget execution reports. To analyse this question the Pearson chi-square analysis is used. Brusca (1997) reported that the

stakeholders who had training in the area of management attribute greater usefulness to the information disclosed in the financial reports, while Yamamoto (2008) found that experience has positive association with the usefulness of municipal financial reporting. Table 6. shows that there is no significant relationship ($p\text{-value} > 0.05$) between the experience and the use of the reports in Croatian public sector, as well as between the field of education and the use of reports in Croatian public sector. However, there is a significant relationship (at 5% level) ($p\text{-value} < 0.05$) between perceived knowledge in PSA and the use of Report on revenue, expenses, receipts, and expenditures. That means that perceived knowledge in PSA influences the use of that financial report. Respondents who evaluated their knowledge in public sector accounting as sufficient or who considered themselves to be experts in that field, used the Report on revenue, expenses, receipts, and expenditures more than respondents with minimum knowledge in the field of public sector accounting. In other words, those who perceived their knowledge in the field of public sector accounting at a minimal level, (34% of respondents) mainly used Report on revenue, expenses, receipts, and expenditures, while additional 29% of such respondents who perceived their knowledge in the field of public sector accounting at a minimal level used that report often. Respondents who evaluated their knowledge as sufficient (35% of respondents) mainly used the Report on revenue, expenses, receipts, and expenditures while 45% of such respondents often used that report. In addition, the 33% of respondents who perceived that they are experts in the field of public sector accounting, mainly used the Report on revenue, expenses, receipts, and expenditures while more than half of those respondents (i.e., 56%) used the Report on revenue, expenses, receipts, and expenditures often. The interesting results are around gender. The results show that the use of financial reports (Balance sheet, Report on expenditure according to functional classification, Report on changes in the value and volume of assets and liabilities and Notes) is favoured by women. That is, 24% of women respondents often use balance sheet, while 20% of men respondents report comparative use of balance sheet. In the case of the Report on expenditure according to functional classification 28% of women respondents and 26% of men respondents often use this report. When it comes to the report of changes in the value and volume of assets and liabilities 20% of women evaluated that they use that report often, while only 15% of men respondents often use that report. Finally, when it comes to notes, 28% of women evaluated that they use the notes often and 23% of men respondents did so.

As a conclusion to the fourth research question, we cannot fully prove evidence that personal characteristics are related to the use of public sector reports, and our findings only partially the UET theory. Namely, according to the results, we determined that experience and field of education do not influence the use of public sector reports. These results are not in accordance with Yamamoto (2008), who pointed to a positive connection between experience and the use of reports. Similarly, our results are not consistent with results reported by Faber and Budding (2022). However, our results are in line with Sinervo & Haapala (2019). Our results are also inconsistent with

Brusca (1997), who reported that there is a positive connection between training in the area of management and usefulness. Namely, our results indicate that the field of education is not related to the use of public sector reports. However, our results show that perceived knowledge in the field of PSA is related to the use of Report on revenue, expenses, receipts, and expenditures. Hence, we can conclude that training and education, especially in the public sector accounting, are partially related to the use of public sector reports. Finally, Anessi-Pessina and Sicilia (2020) found that gender affects the extent of accounting manipulations. Our findings are also that gender affects the use of individual public sector reports. However, to fully appreciate the effect of gender on such use, there would be a need to further investigate in some detail the gender aspect, which is outside of the scope of the current paper.

Table 6. Relationship between public managers personal characteristics and use of reports in public sector

Report	Knowledge in PSA		Field of education		Experience		Gender	
	Pearson chi-square (value)	p value	Pearson chi-square (value)	p value	Pearson chi-square (value)	p value	Pearson chi-square (value)	p value
Balance sheet	0.068	0.131	0.066	0.148	0.036	0.428	0.121	0.008
Report on revenues, expenses, receipts, and expenditures	0.098	0.031	0.022	0.630	0.0001	0.998	0.065	0.150
Report on expenditure according to functional classification	0.015	0.741	0.019	0.676	0.079	0.080	0.094	0.037
Report of changes in the value and volume of assets and liabilities	0.035	0.445	0.003	0.948	0.028	0.542	0.158	0.001
Report on liabilities	0.076	0.095	0.0003	0.995	0.021	0.643	0.085	0.060
Notes	0.053	0.240	0.016	0.724	0.072	0.113	0.118	0.009
Annual budget execution report	0.089	0.0848	0.007	0.880	0.040	0.383	0.046	0.312
Semi-annual budget execution report	0.033	0.468	0.070	0.120	0.070	0.121	0.028	0.541

Source: Author's elaboration

5. CONCLUSIONS

Accounting information in financial reports presents the main tool for making decisions and for improving accountability and transparency of public managers. Many countries conducted reforms in public sector, that included implementation of accrual accounting base in financial reporting, with the aim of providing information important to improving public sector management and resource allocation. Some countries implemented accrual accounting in the budgetary process too. However, in some countries dual reporting system still exists which means that budgetary reports are prepared on cash or modified cash basis, while financial reports are prepared under accrual or modified accrual basis. Although previous studies showed that financial reports are becoming more important in the conditions where dual reporting system is still present, budgetary reports continue to play the main role in managing in public sector and the perception of their usefulness is still very high. In Croatia, there is also a dual reporting system in place. On the road to implement full accrual accounting basis in Croatian public sector, Croatia is in the transitioning phase and continues to implement modified accrual accounting basis for preparing financial reports, while budgetary reports are prepared under cash basis.

This paper analyses whether public sector managers in Croatia use financial reports prepared on accrual or modified accrual basis. This study also investigates whether public sector managers in Croatia use budget execution reports, prepared on cash accounting basis, rather than prescribed financial reports. This study reports that 96% of public managers are aware of financial reports prepared on accrual or modified accrual basis. The research in this study also show used report is the Report on revenue, expenses, receipts, and expenditures, while other financial reports are used less. Previously conducted research in Croatia had showed that financial reports were largely prepared in order to be in compliance with legislation and not that much driven by their use. However, from results in this paper it is possible to notice that some changes are happening since managers state that the main reason for using financial reports now is to support their decision-making process. Our results also indicate that public managers in Croatia are more focused on financial performance rather than financial position. In terms of managers role and position the research in this study shows that public managers on local level use financial reports less than managers in other, higher positions.

This paper also addresses the issue of whether public managers' current positions play a role in the use of financial and budget execution reports. In our case, results showed that for some financial reports i.e., Balance sheet, Report on changes in the value and volume of assets and liabilities and the Notes there are significant differences with respect to the public sector position and their use of reports i.e., public managers who are not in the position of making first or significant decisions (i.e. deputies) use financial reports less. Finally, in this paper we analyse whether some personal characteristics (perceived knowledge in the public sector accounting, field of education, experience in the position, and gender) are associated with the use

of financial reports and budget execution reports. Our results show that there is a significant relationship between perceived knowledge in PSA and the use of Report on revenues, expenses, receipts, and expenditures. Overall, we can conclude that the role and characteristics of managers can be partially associated with the use of public sector reports and we can partially support UET theory. From the findings of the research, it is possible to conclude that greater emphasis should be placed on the education and training of managers. There appears to be a need to educate them about the benefits of applying the accrual accounting basis on one hand, and on the other hand to train them to understand the information prepared on the accrual basis and the use of such information in decisions making.

One finding that is of particular notice is that budget execution reports, prepared under cash basis, still play the main role in decision-making process, and are still often used by all. As the financial reports in Croatia are prepared using modified accrual base, the question arises as to whether the disclosure of information under accrual accounting basis is too complicated for managers' use under current structures of responsibility and accountability and whether managers are ready the transition to full accrual accounting. It is obvious that some changes are still necessary. However, it appears that before reforms are fully implemented, it is necessary to create good preconditions for changes, including understanding why and how the information, including the accounting information is used in public sector so to enable policy makers to secure appropriate resources and systems, and to adequately train and educate the users and preparers of reports in public sector entities (PULSAR, 2021).

The limitation of the research in this paper is twofold. According to Van Helden (2016) research based on questionnaire overestimates the frequency of real use while observational studies provide a more accurate picture. This study uses questionnaire as a main instrument of research and therefore potentially suffers from such overestimates. In addition, this study is performed in one setting only, the Croatian public sector. As such the findings of this study might be idiosyncratic with that setting and may not be easily generatable to other settings. Future research could include other groups of information users in addition to public sector managers to investigate whether they use financial reports, what the reasons for using the reports are and what factors influence the use of the reports. In addition, more in depth research of the findings of this study could be conducted through a series of interviews with the public sector managers and other users. Finally, this study could benefit from replication in other settings to assess the applicability of findings in the wider context.

Our study contributes to the academic literature about the use of financial reports and budget execution reports in public sector. This research provides information which are preferred reports in the environment of dual public sector reporting. Our findings show that budgetary information and information on financial performance prepared on cash basis are still the primary focus of public sector managers, although financial reports prepared on accrual basis are also recognized as important in decision making process.

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