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**JEL: A20, H83, M41**  
**Original scientific article**  
<https://doi.org/10.51680/ev.36.2.7>

Received: June 22, 2023  
Accepted for publishing: September 14, 2023

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# ARE HIGHER EDUCATION INSTITUTIONS PREPARING STUDENTS FOR THE PUBLIC SECTOR ACCOUNTANT POSITION? – CASE OF CROATIA

## ABSTRACT

**Purpose:** The requirements for information in the public sector are continuously changing and there is a need for accountants who are capable to respond to these challenges. Universities, i.e. higher education institutions (HEIs), are recognized as institutions that provide fundamental knowledge, and a discussion of education in the field of public sector accounting is required. The purpose of this paper is to present the opinions of public sector accountants and expectations of students regarding education in the field of public sector accounting at HEIs in Croatia.

**Methodology:** A survey was conducted among accountants employed in public sector entities and among students of faculties of economics at public universities in Croatia. The results of the aforementioned survey are analysed in the SPSS software package using descriptive and inferential statistics.

**Results:** Results showed that students as well as public accountants agree that formal education is not enough for the position of public accountant. Furthermore, students are not interested in the position of public accountant. Therefore, public universities should rethink modifying the structure and programs of courses related to public sector accounting.

**Conclusion:** The results are an invitation to public policy creators to work on the attractiveness of the position of public sector accountant by offering better conditions. The authors of the paper therefore highlight the necessity for better cooperation between accountants and the academic community in order to improve education in the field of public sector accounting and meet the needs for professional and trained accountants who are the future of the profession.

**Keywords:** Public sector accounting, education, reforms, accountants, students, survey

## **1. Introduction**

Definition of accounting presents the basis for the identity of the accounting profession. According to Carnegie et al. (2021), accounting is a technical, social and moral practice concerned with the sustainable use of resources and appropriate accountability to stakeholders to enable progress of organizations, people and nature. Therefore, it is not surprising that there is a growing demand for professional and trained accountants in the private as well as in the public sector given the fact that accountants, by preparing and providing accounting information for different categories of stakeholders, are the cornerstone (International Accounting Education Standards Board, 2019) of good financial management.

The accounting profession has faced demands to provide additional information beyond financial information, including information on sustainability, in order to achieve transparent and standardized reporting (Caruana & Dabbicco, 2022). Although accountants can improve knowledge through training during their careers, universities have been recognized as places that play a key role in providing students with appropriate basic knowledge (Thom, 2019), preparing them to become experts in the field of public sector accounting (PSA) and to be able to support successful implementation of PSA reforms. Previous studies, however, have shown that PSA is a rather neglected course (Fox, 1977). Moreover, previous studies showed that PSA often remains on the periphery of business schools (Neves et al., 2022).

Since reforms and changes have taken place in PSA, including the implementation of new accounting basis and additional reports, higher education institutions (HEIs) should recognize the need to improve education in the field of PSA, because PSA and related education should go hand in hand (Heiling, 2020). Previous studies have shown that HEIs were not focused on the public sector (Adam et al., 2019), so there is a gap in knowledge caused by inadequate formal university education of students (Chan, 2022).

In addition, HEIs should seek to motivate students to work in PSA. Previous studies also showed that there is a gap in that area, because there was a limited interest of students in the public sector accountant positions (Martin & Waymir, 2017).

This paper investigates whether higher education institutions provide sufficient education for the position of public sector accountant from the perspective of both students and accountants. Moreover, this paper explores how attractive the field of PSA is to students for their career development.

This paper is divided into five sections. After the introduction, the paper gives a review of existing literature. The following section presents the research problem by analyzing the main characteristics of formal education in Croatia. The methodology, research results and analyses are presented in the fourth section, which is followed by the concluding section that summarizes the main findings and proposes some future research.

## **2. Literature review**

Public sector accounting is extremely complex (Beights, 1954) and requires adequate study programs, training and experience at a highly intellectual and professional level. However, PSA courses appear to be a rather neglected in the last 40 years (Fox, 1977, Neves et al., 2022), and university offerings are limited (Egenolf & Willis, 1983, Henry, 2005).

Namely, Fox (1977) discussed the problems in PSA education and concluded that PSA course offerings are limited, while a similar study conducted in the USA five years later pointed to a limited interest of universities in offering courses in the areas of PSA due to the lack of financial resources and qualified personnel (Egenolf & Willis, 1983). While researching the coverage of governmental accounting at universities in the USA Henry (2005) found that only marginal progress in the coverage of governmental accounting at certain universities was observed. By researching study programs at four European universities (Germany, Italy, Portugal, and Spain) Adam et al. (2019) concluded that although the integration of PSA into study programs and curricula of higher education institutions has increased in recent years, there are both a limited number of academics who teach those courses and a small number of students who attend such courses. The same study shows that public accounting topics are limited and that there are several differences in program offerings. Brans and Coenen (2016) concluded that, although there are attempts to harmonize higher education in Europe, there is no European model for teaching public sector ac-

counting and public administration. Furthermore, some academics (Cordery, 2013, Neves et al., 2022) highlighted that accounting education is primarily focused on teaching about the private rather than the public sector. Therefore, some studies have indicated a low level of PSA in university curricula (Huy, 2019). The reasons for low levels were lack of financial resources, a narrow faculty interest (Henry, 2005), limited teaching experience and research interest in PSA, and lack of PSA content in accounting textbooks (Sciulli & Sims, 2008). This points to the fact that graduates in the field of accounting do not have adequate knowledge about accounting requirements in the public sector. A previous study has also shown that PSA courses do not follow the changes in the real world, i.e., changes in the public sector, especially in reference to non-financial reporting and teaching about IPSAS and EPSAS (Adam et al., 2019). Therefore, there is a gap in public sector accounting education (Heiling, 2020). A study conducted by Neves et al. (2022) at universities in Brazil pointed to the fact that, although the implementation of IPSAS is carried out at all levels of government, the departments of accounting at higher education institutions have not changed their curricula and have not included teaching about the fundamentals of accrual accounting in their courses. Moody and Marlowe (2009) show that what was taught in the USA some 25 years ago was still taught in 2009 and was focused on budget execution, budget analysis, budget preparation etc., with no accrual accounting. Furthermore, the authors concluded that most accounting courses are focused on the preparation of financial data, rather than on understanding how to use these data (Ahmed, 2019).

Heiling (2020) also emphasizes that the growing complexity of PSA and its interdisciplinarity create the need to develop study programs at graduate level. To make these improvements, it is necessary to identify common educational goals and practices in PSA teaching and prepare textbooks for accounting in the public sector, including international comparative perspectives as well (Chan, 2022).

Although some studies (Cohen & Karatzimas, 2022; Heiling, 2020) emphasize that it is necessary to increase the understanding of PSA for public administration students who will be future managers, it is also essential to improve the education system for accounting students because they are likely to

be future implementers of reforms who will participate in the processes of preparing financial reports.

Henry (2005) also emphasized that one of the limiting factors for developing PSA courses is the lack of interest among students. More recent research conducted by Martin and Waymir (2017) investigated undergraduate and graduate accounting students' perceptions of careers in governmental accounting and whether there are differences in perceptions among students who studied elective courses in governmental and non-profit accounting. Their results show that students' perceptions of monetary and non-monetary benefits associated with a career in the public sector increased if they studied elective courses in governmental and non-profit accounting.

### **3. Development of the research problem – case study of Croatia**

Through the analysis of previous studies, it was observed that higher education institutions play a key role in providing formal education for work in public sector accounting. However, it is also evident that education in the field of public sector accounting is limited (Jafi & Youssef, 2021), with outdated curricula and teaching skills, causing the circular effect, i.e., students' interest in the position of public sector accountant is consequently also limited.

Education and training are very important issues in the social life of any country, and governments have recognized education and training as an important task for sustainable economic development (Huy, 2019). Accounting has always been an area of interest for society and universities. In addition to the rapid development of businesses, a significant part of the development relates to public sector entities in a country. The Republic of Croatia consists of a total of 20 counties and the capital (the City of Zagreb), 127 cities and 428 municipalities (Ministry of Justice, 2010). In addition, Croatia has a large number of government organizations, ministries, departments, institutes, and budgetary and extra-budgetary users that contribute to the development of the country. Thus, the challenge in PSA in Croatia is to harmonize all data in order to increase transparency. But reporting by public sector entities in Croatia is complex and dual. Namely, budget execution reports are prepared on a cash basis, while financial reports are prepared on a modified accrual basis (Vašiček et al., 2022). The economic

crisis as well as the COVID-19 crisis resulted in the need for transparent information to improve public sector accountability. Croatia is a member of the EU and has faced the requirements for harmonizing the public sector reporting system by implementing the accrual accounting basis in PSA. All of these factors resulted in the fact that in Croatia there is a need for trained students with specialized knowledge in the field of PSA who will work in this changing environment.

In the Republic of Croatia, of the total number of students enrolled in universities in the 2021/2022 academic year, 81.3% were enrolled in faculties, 13.0% in polytechnics, and 3.9% in colleges. In the 2020/2021 academic year, of the total number of students enrolled in university (i.e., 82.9%), 39.1% of students were enrolled at the University of Zagreb, 11.6% at the University of Split, 9.7% at the University of Rijeka, 9.0% at the University of Osijek, 3.2% at the University of Zadar, 2.7% at North University, Koprivnica, 2.1% at the University of Pula, 1.6% at Libertas International University, 1.4% at the University of Slavonski Brod, 0.9% at the University of Dubrovnik, 0.8% at the Croatian Catholic University of Zagreb, and 0.8% at Vern University. The remaining 17.1% of students were enrolled outside the university (Croatian Bureau of Statistics, 2022a). Since 69.4% of the students are enrolled in the first four public universities, we decided to analyze in detail the education system in the field of public sector accounting at the universities of Zagreb, Osijek, Rijeka, and Split and the associated faculties of economics. Analyzing the education system at the four largest public universities in Croatia, it is observed that courses related to public sector accounting are offered very rarely at faculties of economics, and that there is generally only one course related to the field of public sector accounting. Undergraduate and graduate study programs

at these universities are oriented towards private sector accounting, while public sector curricula receive limited attention.

Learning goals and outcomes at the Croatian universities are similar, and at undergraduate and graduate level they are focused on teaching an institutional and professional framework of accounting, budget classifications, a chart of accounts and accounting rules, interpretation of financial statements and annual reports of budgetary users, as well as the application of the government chart of accounts. Therefore, these courses are adapted to learning about national budgets and accounting rules and focused only on the preparation of financial data, rather than on data use (for further information, see Table 1).

In addition, courses related to public sector accounting are offered at postgraduate studies. Learning goals and outcomes at postgraduate level are similar to learning goals at undergraduate and graduate level; however, they are also focused on teaching the International Framework of Public Sector Accounting with emphasis on International Public Sector Accounting Standards (IPSAS), the dual reporting system, budgetary and financial reports, Croatian taxation regulation and effects on budgetary and non-profit organizations, accounting information for internal users with emphasis on performance measurement and cost management. As can be seen, postgraduate studies teach students how to use information, but the number of people pursuing postgraduate studies in accounting in the Republic of Croatia is very small. In the 2021/2022 academic year, a total of 1,707 students were enrolled in postgraduate studies, 121 of whom were enrolled in the faculties of economics in Osijek, Zagreb and Rijeka (Croatian Bureau of Statistics, 2022b).

**Table 1 PSA offer at four public universities in Croatia**

University	Course	Degree	Topics
			Institutional and functional coverage of the public sector - The budget system and the basics of the financial accounting information system of the budget - State accounting - accounting concepts and budget classifications - International accounting standards for the public sector - Legal framework of budget accounting in Croatia - Application of the accounting plan and posting of typical business events of budgetary entities - Financial reports in the budget system - Report on budget execution - Accounting system of private non-profit organizations - Application of the accounting plan and recording of typical business events of non-profit organizations - Financial reporting system of private non-profit organizations
University of Zagreb (Faculty of Economics and Business)	Compulsory course: Non-profit Accounting	Integrated university study	
	Accounting for Non-profit Organizations	University postgraduate specialist study	Accounting for Budgetary and Non-profit Organizations - institutional and professional framework of accounting - budget classifications - a chart of accounts and accounting rules, financial statements and annual reports - International Public Sector Accounting Standards
	Public Sector Accounting	University postgraduate specialist study	Accounting for Budgetary Organizations - International Public Sector Accounting Standards - scope of public sector - public financial management cycle - general accounting in the public sector - financial statements and annual reports - accounting information for internal users - performance measurement - cost management
	Financial Reporting for Non-profit Organizations	University postgraduate specialist study	Accounting for Budgetary and Non-profit Organizations - general accounting in the public sector - international framework of PSA (IPSAS, EPSAS) - institutional and professional framework of accounting in Croatia - dual reporting system - budgetary and financial reports - performance measurement and cost management - system of internal controls in the public sector - auditing in the public sector
J.J. Strossmayer University of Osijek (Faculty of Economics and Business)	Accounting for Budgetary and Non-profit Organizations	University graduate study	Budgetary accounting and governmental accounting information system - non-financial assets - expenses - revenue - receipts - expenditures - own sources - financial reports - preparing financial reports and recording of transactions
University of Split (Faculty of Economics, Business and Tourism)	Compulsory course: Accounting for Governmental Entities	Graduate professional study	The content and the objective of accounting for governmental entities - Development and the basics of accounting for governmental entities - System of financial reporting - Application of the chart of accounts - Accounting systems in Croatia - Financial statements in accounting for governmental entities - Recording of transactions and preparing financial reports

University	Course	Degree	Topics
	Elective course: Accounting for Non-profit Organizations	University undergraduate study	Accounting for Budgetary and Non-profit Organizations - institutional and professional framework of accounting - budget classifications - a chart of accounts and accounting rules, financial statements and annual reports
	Accounting for Non-profit Organizations	University postgraduate specialist study	Accounting for Budgetary and Non-profit Organizations - types of organizations - institutional and professional framework of accounting - budget classifications - a chart of accounts and accounting rules, financial statements and annual reports - Application of the chart of accounts
	Accounting for Budgetary and Non-profit Organizations	University postgraduate specialist study	
University of Rijeka (Faculty of Economics and Business)	Elective course: Accounting for Budgetary and Non-profit Organizations	University graduate study	Institutional and functional coverage of the public sector - The budget system and the basics of the financial accounting information system of the budget - State accounting - accounting concepts and budget classifications - International accounting standards for the public sector - Legal framework of budget accounting in the Republic of Croatia - Application of the accounting plan and posting of typical business events of budgetary entities - Financial reports in the budget system - Report on budget execution - Non-profit organizations in the economic environment - Accounting system of private non-profit organizations (NGOs) - Application of the accounting plan and recording of typical business events of non-profit organizations - Financial reporting system of NGOs
	Financial Management and Control in the Public Sector	University postgraduate specialist study	Budget system: elements and processes, a system of financial management in the public sector - Internal and external supervision and control in the public sector - Accounting-information system as accounting support to management, liquidity and asset management system, measuring and monitoring performance in the public sector - fiscal responsibility
	Management Accounting in the Public Sector	University postgraduate specialist study	New Public Management - Accounting and reporting in the public sector - liquidity and asset management system, measuring and monitoring performance in the public sector, fiscal responsibility - auditing in the public sector
	Accounting for Budgetary and Non-profit Organizations	University postgraduate specialist study	Accounting for Budgetary and Non-profit Organizations - general accounting in the public sector - international framework of PSA (IPSAS, EPSAS) - institutional and professional framework of accounting in Croatia - dual reporting system - budget and financial reports - accounting information for internal users with emphasis on performance measurement and cost management - Croatian taxation regulation and effects on budgetary and non-profit organizations

Source: Authors

In order to enhance the quality and recognition of European higher education systems and improve the conditions for exchange and collaboration both within Europe and internationally, the Bologna Process was introduced in 49 European coun-

tries as an intergovernmental higher education reform process. Over the years, the Bologna Process has grown into a Europe-wide policy platform for coordinated higher education reform. It addresses new topics, such as fundamental values and learn-

ing and teaching as well as its long-standing commitments, which require continued attention (European University Association, 2023). Before the Bologna Process (2001), courses related to public sector accounting did not even exist in Croatia (Vašiček et al., 2022). Therefore, it is possible to conclude that some progress in public sector accounting is taking place. New trends including accrual accounting and IPSAS are only taught at postgraduate level, which is a disadvantage given that most students start working after completing their graduate studies, and only a smaller percentage of students decide to continue their education at postgraduate level.

Therefore, this paper aims to answer the following research questions:

*RQ1: Are public universities providing sufficient knowledge for a student's future position of public sector accountant in Croatia?*

*RQ2: Are students interested in public sector accountant careers in Croatia?*

#### **4. Methodology, analyses and research results**

In order to provide answers to the first research question, questionnaires were prepared and sent to public sector accountants and to students studying at four public universities in Croatia. The questionnaires contained mostly close-ended questions. In order to analyze the data, we used descriptive and inferential statistics. Questionnaires were sent to accountants by e-mail. The accountants in our sample are accountants employed in the public sector - in a state unit, an institution of a local or regional self-government unit, a budget user of the state budget, and a budget user of local self-government units, i.e., the population of 3,742 accountants (Ministry of Finance, 2023). E-mail addresses of the accountants in our sample were obtained in cooperation with a professional journal for accounting in the public sector in the Republic of Croatia. Thus, all accountants interviewed are subscribers to this journal. Using the random selection method, the questionnaire was sent to 500 e-mail addresses of public sector accountants, and 151 responses were received, which is a response rate of 30.2%. In the 2020/2021 academic year, there were 13,141 students enrolled in the faculties of economics at four universities, i.e., 57% in Zagreb, 16% in Rijeka, 14% in Osijek, and 13% in Split. We decided to survey

the students studying at the Faculty of Economics and taking an accounting course. Questionnaires for students were prepared in online form, and academics from the field of accounting were asked to forward the questionnaire to students. According to academia, 489 students were contacted and 135 student responses were collected, which is a response rate of 27.6%. To provide the answer to the second research question, data were collected from questionnaires answered by students.

*Do public universities provide sufficient knowledge for the future careers of public sector accountants in Croatia?*

Our sample consisted of students from the faculties of economics, of whom 75% were accounting students, and 25% were students of other economics majors. In terms of their years of study, 58% of participating students were fourth-year students, 17% were fifth-year students, 16% were third-year students, and a small number of students were in their second or first year of study.

At the beginning, we asked students if they had taken and PSA-related courses. Of 135 respondents, 75% or 101 students took PSA courses, while 25% did not take any PSA-related course. They were asked to evaluate concepts and contents of these courses. Some 10% of them assessed these courses as extremely complex, 38% as complex, 28% as neither complex nor simple, 4% as simple, while 20% could not provide any assessment. Then the students were asked to evaluate their knowledge of accounting and public sector accounting. As many as 72.6% of students assessed their knowledge of accounting as sufficient. In the case of PSA, 40% of students consider that their knowledge is at a minimal level, while 36% consider it as sufficient. Moreover, our intention was to determine whether studying PSA courses affected their evaluation of their knowledge. Results are presented in Table 2. Of those who studied the PSA-related courses, 34% consider their knowledge to be at a minimal level, 46% consider their knowledge to be sufficient, 3% consider themselves experts, while 17% could not provide any assessments. Of those who did not study PSA-related courses, 58% considered their knowledge at a minimal level, 9% as sufficient, while 33% could not provide any assessment. Based on these results, it is evident that the evaluation of knowledge is related to attending PSA-related courses, and this was further confirmed by Cramer's V correlation test.

**Table 2 Correlation between the evaluation of knowledge in the field of PSA and studying PSA-related courses**

		Did you attend any PSA-related courses?	
		Yes	No
		Percent	Percent
Evaluation of knowledge in the field of PSA	Minimal	34.0	58.0
	Enough	45.0	9.0
	Expert	3.0	0.0
	Can't assess	17.0	33.0
Total		100.0	100.0
		Value	Approximate Significance
Cramer's V		0.356	<b>0.001</b>

Source: Authors

When asked if they thought that the knowledge they would acquire in PSA courses would be sufficient for work in public sector accounting, 44% of students considered their knowledge insufficient, 29% believed it is sufficient, while 27% of respondents did not provide any assessment.

We also asked the accountants whether the knowledge acquired at the university prepared them sufficiently for the position of public sector account-

ant. The opinions of respondents about education in public sector accounting depend, among other things, on their personal characteristics such as their level of education, time spent in a particular position, their age and experience in the position. We examined these personal characteristics of public accountants who responded to our survey and the results are presented in Table 3.

**Table 3 Personal characteristics of public sector accountants**

Gender		Age	
Male	13.9%	25-35	15.2%
Female	86.1%	36-45	25.8%
		46-55	31.8%
		56-65	26.5%
		Older than 65	0.7%
Education		Field of education	
High school	17.9%	Economics - accounting	35.8%
Bachelor's degree	15.9%	Economics - other fields	60.9%
Master's degree	50.3%	Social sciences	3.3%
Postgraduate specialist studies	10.6%	In a position	
Master of Science	4.6%	Less than 1 year	2.6%
PhD	0.7%	1-5	13.2%
		6-10	22.5%
		11-15	15.2%
		More than 15	46.4%

Source: Authors



Most respondents were women (86%) and 1/3 of the respondents were aged between 46 and 55. As for the period of time in the position, 46.4% of respondents stayed in their positions for more than 15 years, while only 15.8% of respondents stayed in their positions up to 5 years. In terms of education, 50.3% of respondents completed graduate study programs, while 17.9% of respondents finished high school. Most respondents have an education in the field of economics, 35.8% of whom in accounting.

We also asked accountants to evaluate their knowledge in the field of PSA. Two thirds of respondents consider their knowledge sufficient, while 23% of respondents consider themselves to be experts in field of PSA. When age is compared to their evaluation of knowledge in the field of PSA, it is noticeable that 40% of respondents aged 25-35 consider themselves to be experts in the field of PSA, while only 25.6% of respondents aged 36-45 consider themselves to be experts, and 12.5% of those aged 46-55 consider themselves to be experts. In addition, 35.3% of accountants who have been in their positions for the period of 6 to 10 years consider themselves to be experts, 26.1% of respondents who have been in their positions for the period of 11 to 15 years consider themselves to be experts, and 20.0% of respondents who have been in their positions for more than 15 years see themselves as experts. Therefore, the older the respondents are and the longer they have been in their positions, they see themselves to be less of experts in the field of PSA. These results are in line with the study conducted by Budding et al. (2022), who found that there are differences between age groups of management accountants in terms of how they assign their competencies and their actual skills. Budding et al. (2022) found that older accountants scored higher in their technical skills, while for younger accountants their actual skills and importance of technical competencies were equal. Their study indicated that older accountants perceive their technical skills to be better than the skills of younger accountants. In our study, we can conclude that younger accountants seem to be less self-critical and that they consid-

ered themselves to be greater experts in the field of PSA.

Accountants were also asked whether they attended PSA courses, and 62% of them gave a positive answer, while 38% of respondents gave a negative answer, i.e., they did not take any PSA courses. Of those respondents who did not take any public sector accounting courses, 33% were aged 46-55, 30% were aged 36-45, 26% were aged 56-65, and 10% were aged 25-35. These results are in line with the fact that before the Bologna Process there were no PSA-related courses in Croatia.

In addition, we asked accountants if they needed additional forms of education for their daily work as accountants in the public sector. As many as 98.7% of respondents answered that it is necessary to have additional forms of education, and only 1.3% of respondents disagreed.

Finally, accountants were asked if they think it is necessary to introduce additional forms of training in the field of PSA (e.g., lifelong education, specialist programs) through universities. Results are presented in Table 4. Of 151 accountants, 113 or 74.8% of respondents agree that it is necessary to introduce additional forms of training in the field of PSA at universities, while 6% of respondents disagree, and 19.2% of respondents are unable to assess whether there is a need for PSA courses. Ninety percent of respondents in the position from 1 to 5 years, 82% of respondents in the position from 11 to 15 years, 70% of respondents in the position for more than 15 years, and 73% of respondents in the position from 6 to 10 years agreed that it is necessary to introduce additional training at universities. Although younger accountants perceive themselves as greater experts in the field of PSA than older accountants, results in Table 4 indicate that accountants with less experience agree that there is a need to introduce additional forms of training in the field of PSA at universities. These results indicate that there are differences in training needs among public sector accountants with diverse experiences. Budding et al. (2022) also highlight differences in the age groups of accountants and their training needs.

**Table 4 Need for additional forms of training at universities**

Is it necessary to introduce additional forms of training in the field of PSA at universities?		Percent	
In the position	Less than 1 year	It is necessary	50.0
		Can't estimate	50.0
		Total	100.0
In the position	1-5 years	It is necessary	90.0
		It is not necessary	5.0
		Can't estimate	5.0
		Total	100.0
In the position	6-10 years	It is necessary	73.5
		It is not necessary	8.8
		Can't estimate	17.6
		Total	100.0
In the position	11-15 years	It is necessary	82.6
		It is not necessary	4.3
		Can't estimate	13.0
		Total	100.0
In the position	More than 15 years	It is necessary	70.0
		It is not necessary	5.7
		Can't estimate	24.3
		Total	100.0

Source: Authors

As a conclusion for the first research question, it is evident from the perspective of both students and accountants that public universities have not provided sufficient knowledge for the position of public sector accountant. By analyzing the results in our paper, we observe that in our sample 75% of fourth-year accounting students attended a course in PSA, which points to the fact that PSA courses are not offered in other years of study. These results indicate that limited space is given to PSA at public universities. This is in line with previous studies (Cordery, 2013; Huy, 2019; Jafi & Youssef, 2021; Neves et al., 2022). Furthermore, when evaluating their PSA knowledge, over 40% of students believe that their knowledge is at a minimal level, and 58% of students who did not take a PSA course share this opinion, as well as 1/3 of those who took a PSA course. This indicates that in students believe that they are not confident about their knowledge. Although students have no practical experience, 40% of them believe that universities do not provide them with enough knowledge for the position of public sector accountant. The same opinion is shared by the surveyed accountants, who confirmed that they need additional education for the position

of public sector accountant. Therefore, although the results show that there are PSA-related courses at public universities, practitioners and students agree that these are not sufficient for the position of public sector accountant. Moreover, accountants express the need to introduce additional forms of education at public universities. Although we can see from the results that the Bologna Process was introduced only after 2001 and that some accountants had no contact with PSA-related courses at all, we asked them for their opinion because we believe that their long experience can assess whether younger colleagues have a sufficient level of knowledge that they acquire at university or whether it is still insufficient.

*Are students interested in career public sector accountant careers in Croatia?*

The second research question addressed whether students were interested in pursuing careers as public sector accountants. We asked students if they were thinking about enrolling in postgraduate specialist studies in the field of PSA. The results presented in Table 5 show that 62% of respondents do not think about attending postgraduate specialist studies. We linked that question with the ques-

tion of whether they had attended any PSA-related courses to see if their previous PSA studies motivated them to continue studying in that field. The

results show that, although they took a PSA-related course, they are not interested in attending postgraduate specialist studies in the field of PSA.

**Table 5 Possibility of attending postgraduate specialist studies in the field of PSA**

Are you considering the possibility of attending postgraduate specialist studies in the field of PSA?	Yes	38.00%
	No	62.00%
Total		100.00%
Cramer's V - Value		0.041
Approximate Significance		0.637

Source: Authors

The students were then asked where they would like to work. Out of 135 students, 61.5% would like to work in the field of accounting. But it can be seen in

Table 6 that only 21.69% of respondents consider a career in the field of public sector accounting.

**Table 6 Where students would like to build their career**

	Percent
Public sector	21.69%
Private sector	60.24%
Non-profit sector	3.61%
Own business	14.46%
Total	100.00

Source: Authors

Therefore, it is possible to observe that although students are interested in working in the field of accounting, only one fifth of them would consider a career in the public sector. Therefore, as a conclusion for the second research question, we can infer that the results are worrying and the question arises whether Croatia will face a lack of public sector accountants in the future. If we look at the age of current accountants, we can notice that in our sample accountants are aged 46 years and above. The research results in this paper are in line with previous studies, i.e. previous research has shown that students' interest in the field of public sector accounting is limited (Beights, 1954; Engstrom, 1979; Henry, 2005). In our case, there is also a negative attitude towards continuing education in the field of public sector accounting. Since the curriculum at public universities in the field of accounting is primarily designed around private sector account-

ing, similar to other countries (Cordery, 2013; Huy, 2019; Neves et al., 2022), it is evident that this also affects students' choices of building a career in private sector accounting rather than in public sector accounting.

### 5. Concluding remarks

The aim of this paper is to determine whether public universities in Croatia provide sufficient knowledge for the position of public sector accountant. Analyzing the results of our research, we found that both students and accountants believe that public universities do not provide enough knowledge of public sector accounting. More than one third of the students in our sample rated their knowledge of public sector accounting as minimal. Furthermore, the students agree that the knowledge acquired in public sector accounting courses is not sufficient

for the position of public sector accountant. By researching available courses at public universities in Croatia, we also confirmed this fact, because PSA is taught less than private sector accounting. Also, the PSA curriculum in Croatia is mainly focused on national legislation, while new principles, standards and reporting systems are not taught. The accountants who have been working in the public sector in Croatia for a long period of time emphasize that additional education is necessary for their daily work needs and agree that public universities should offer additional education programs.

The results of this research show an interesting fact, i.e., accountants who are older and have more years of experience at their workplace consider themselves less expert in the field of public sector accounting than their younger colleagues. This is in line with the fact that before the Bologna Process there were no specific courses related to public sector accounting. Based on these results, we can observe that universities provide some basic education, but there is still a lot of room for further development and improvement. Although younger accountants perceive themselves as greater experts in the field of PSA than older accountants, the results additionally show that accountants with less experience in the position agree more that there is a need to introduce additional forms of training in the field of PSA at universities. Therefore, the formal education system in the field of PSA should follow trends in reporting on the one hand, and increase or introduce the offer of additional and informal education on the other hand.

The second goal of this paper was to determine whether students are interested in starting a career as accountants in the public sector. The research results in this paper show that only one-fifth of students are interested in starting their careers as accountants in the public sector. Therefore, it is obvious that education at public universities in Croatia does not motivate students enough for a position in PSA. This could become a problem and challenge in the future with the shortage of qualified accountants in the public sector. We believe that it is time to

review and change the curriculum of PSA courses at universities and introduce additional forms of education that would provide students and professional accountants with skills needed to meet future challenges.

The significance of this work is multifaceted. Namely, we can state that the Bologna Process has brought changes in the higher education system in Croatia. If we compare the results with the research conducted by Adam et al. (2019) in 4 European countries and with Croatia, we will establish that there are similarities. In all the countries mentioned, even if the offer is limited, there are courses in public sector accounting that focus on the study of national legislation until the needs of practitioners are not recognized and new trends are not studied. The Bologna Process has led to a positive change with the introduction of a specialized course in public sector accounting. However, changes are still needed, as it can be observed that new trends are not being followed, which ultimately leads to students not having sufficient knowledge and skills to work as accountants one day. The Bologna Process certainly provides an opportunity to create cooperation between universities in the European Union in order to influence, through joint action, the improvement of courses, and perhaps entire study programs, which focus on public sector accounting. In addition, the distinctive feature of this work is that we were the first to survey accountants and students about education, contributing to the literature in the field of public accounting education, while Adam et al. (2019), for example, surveyed professors in their study. This study also has certain limitations. The research was conducted in only one country - Croatia - which limits the generalizability of the results. Future research may expand the sample and consider other research methods such as in-depth interviews in order to better understand public accountants' and students' attitudes towards PSA education. Despite these limitations, our paper contributes to the scientific literature related to PSA education and highlights the need to improve the existing PSA curriculum.

## REFERENCES

1. Adam, B., Brusca, I., Caperchione, E., Heiling, J., Jorge, S. & Manes Rossi, F. (2019). Are higher education institutions in Europe preparing students for IPSAS?. *International Journal of Public Sector Management*, 33(2/3), 363-378. <https://doi.org/10.1108/IJPSM-12-2018-0270>
2. Ahmed, I. E. (2019). Bridging the gap between governmental accounting education and practice. *Accounting*, 5, 21-30. <https://doi.org/10.5267/j.ac.2018.6.003>
3. Beights, D. M. (1954). Opportunities for a Career in Governmental Accounting. *The Accounting Review*, 29(4), 614-619.
4. Brans, M. & Coenen, L. (2016). The Europeanization of Public Administration teaching. *Policy and Society*, 35(4), 333-349. <https://doi.org/10.1016/j.polsoc.2016.11.005>
5. Budding, T., de Jong, G. & Smit, M. (2022). New development: Bridging the gap – analysis of required competencies for management accountants in public sector. *Public, Money & Management*, 42(7), 565-568. <https://doi.org/10.1080/09540962.2022.2068862>
6. Carnegie, G., Parker, L. & Tsahuridu, E. (2021). It's 2020: What is accounting today?. *Australian Accounting Review*, 31(1), 65-73. <https://doi.org/10.1111/auar.12325>
7. Caruana, J. & Dabbicco, G. (2022). New development: the role of the accountancy profession in saving our planet. *Public, Money & Management*, 42(7), 534-537. <https://doi.org/10.1080/09540962.2022.2073062>
8. Chan, J. L. (2022). Debate: Toward a common body of knowledge for global public sector accounting education. *Public Money & Management*, 42(7), 541-542. <https://doi.org/10.1080/09540962.2022.2064661>
9. Cohen, S. & Karatzimas, S. (2022). New development: Public sector accounting education for users – embedding eLearning and technology in teaching. *Public Money & Management*, 42(4), 291-293. <https://doi.org/10.1080/09540962.2021.1986302>
10. Cordery, C. (2013). Does public services accounting belong in the curriculum?. *Pacific Accounting Review*, 25(1), 101-116. <https://doi.org/10.1108/01140581311318986>
11. Croatian Bureau of Statistics (2022a). *Statistical Reports, 1688 Students, 2020/2021 Academic Year*. [https://podaci.dzs.hr/media/w24asnrf/si-1688-studenti-u-akademskoj-godini-2020\\_2021\\_web.pdf](https://podaci.dzs.hr/media/w24asnrf/si-1688-studenti-u-akademskoj-godini-2020_2021_web.pdf)
12. Croatian Bureau of Statistics (2022b). *Students enrolled on specialist postgraduate studies, 2021/2022 Academic Year*. <https://podaci.dzs.hr/2022/hr/29036>
13. Egenolf, R. & Willis, G. W. K. (1983). Status of Public Sector Accounting Education. *Journal of Accounting Education*, 1(1), 63-69. [https://doi.org/10.1016/0748-5751\(83\)90029-5](https://doi.org/10.1016/0748-5751(83)90029-5)
14. Engstrom, J. H. (1979). Public Sector Accounting Education: Status Update and Extension, *The Accounting Review*, 54(4), 794-799.
15. European University Association (2023). *Bologna Process*. <https://eua.eu/issues/10:bologna-process.html>
16. Fox, J. (1977). Education for Governmental Accountants. *The Government Accountants Journal*, 26(3), 44-52.
17. Heiling, J. (2020). Time to rethink public sector accounting education? A practitioner's perspective. *Journal of Public Budgeting, Accounting & Financial Management*, 32(3), 505-509. <https://doi.org/10.1108/JPBAFM-05-2020-0059>
18. Henry, B. K. (2005). A survey of governmental accounting education studies. *Journal of Public Budgeting, Accounting & Financial Management*, 17(2), 166-179. <https://doi.org/10.1108/JPBAFM-17-02-2005-B004>
19. Huy, P.Q. (2019). Training in Major of Public Sector Accounting: Evaluation the Demand for Higher Education by an Empirical Survey. *TEST Engineering & Management*, 81, 2640-2649.

20. International Accounting Education Standards Board (2019). *A Growing Demand for Public Sector Accounting Education*.  
<https://www.ifac.org/system/files/publications/files/IAESB-Perspectives-Series-Rania-Mardini.pdf>
21. Jafi, H. & Youssef, S. (2021). Public sector accounting education and training as supportive mechanisms of the ongoing accrual-based accounting reforms. *Technium Social Sciences Journal*, 25, 1-8.  
<https://doi.org/10.47577/tssj.v25i1.4853>
22. Martin, R. B. & Waymire, T. R. (2017). Filling the demand for municipal government accountants: The benefits of a governmental and not-for-profit accounting course. *Journal of Accounting Education*, 40, 43-54. <https://doi.org/10.1016/j.jaccedu.2017.04.001>
23. Ministry of Finance (2023). *Register of budgetary and extra-budgetary users*.  
<https://rkpf.drzavna-riznica.hr/PORTAL/Rkp>
24. Ministry of Justice and Public Administration (2010). *The list of counties, cities and municipalities*.  
<https://mpu.gov.hr/gradjani-21417/iz-djelokruga/lokalna-i-podrucna-regionalna-samouprava-24398/popis-zupanija-gradova-i-opcina-24402/24402>
25. Moody, M. & Marlowe, J. (2009). Recent iterations in the public financial management curriculum: Is what practitioners need being taught?. *Journal of Public Affairs Education*, 15(1), 47-58.  
<https://doi.org/10.1080/15236803.2009.12001542>
26. Neves, F. R., Busanelli, A. C. & da Silva, P. B. (2022) New development: The challenges of public sector accounting education in business schools. *Public Money & Management*, 42(7), 569-572.  
<https://doi.org/10.1080/09540962.2022.2066820>
27. Sciuli, N. & Sims, R. (2008). Public sector accounting education in Australian universities: an exploratory study. *Sunway Academic Journal*, 4, 44-58.
28. Thom, M. (2019). Teaching public financial management: An integrated approach to a critical subject. *Teaching Public Administration*, 37(1), 92-106. <https://doi.org/10.1177/0144739418810996>
29. Vašiček, V., Dragija Kostić, M. & Pajković, I. (2022). Education of public accountants in Croatia in the context of reform processes in the public sector. In Leko Šimić, M. (Ed.). *Proceedings of RED 2022 – 11<sup>th</sup> International Scientific Symposium Region, Entrepreneurship, Development* (pp. 820-833). Osijek: Faculty of Economics in Osijek.