



INTERNAL REPORTING IN PUBLIC HOSPITALS – A CASE STUDY IN CROATIA AND SLOVENIA

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Introduction

- This paper is primarily intended to show the similarities and differences in the usage of internal reports at public hospitals in Croatia and Slovenia through empirical research results.
- It also highlights the importance of internal reports for public hospitals through conducted empirical research.
- This paper will also show the similarities and differences in the current legal definition of accounting procedures in healthcare sector in Croatia and in Slovenia.

Current accounting system in NHS

- Modified accrual basis VS. accrual basis
- The basic features of accounting system show that it is impossible to directly confront revenues and the associated expenses, which is a fundamental premise for expressing real financial results.
- The expenditures incurred in the operation of earning income during the reporting period are recognized immediately after the occurrence, while in order for revenues to be recognized, claims must be charged.

Research methodology and data

- The principal area of research is to present the current opinion of accountants and financial officers in Croatian and Slovenian public health care institutions (hospitals) about usage of internal reports.
- To determine all of the above, an empirical survey using questionnaires was done in December 2015 and January 2016 in all Croatian public hospitals in order to gather the necessary data and in Slovenia in March, April and May 2016.
- The questionnaires were sent by e-mail in an online form to accountant and financial officers in 57 Croatian public hospitals. Out of 57 public hospitals (59.65%) 34 responded to the questionnaire.
- In Slovenia out of 22 public hospitals (59.09%) 13 responded to the questionnaire.

- authors wanted to examine do they prepare internal reports and for what purposes internal reports are mainly used in Croatian and Slovenian public hospitals
- In order to get the answer on research question, the authors asked the respondents for what purposes does the management use internal reports and to rank the usage from 1 to 5, 1 being the lowest and 5 being the highest grade of use. Sign tests for median and Wilcoxon Signed Rank Test were done for both countries.

Table 1. Sign tests for median and Wilcoxon Signed Rank Test results based on survey results for or usage of internal reports - CROATIA

Management usage of internal reports	Statistical hypotheses	Statistical test	p-value	Decision, significance level 1%
As an important source of information for decision making and governance	$H_0... \eta \geq 4$	Sign Test for Median	1.000	H0
	$H_1... \eta < 4$	Wilcoxon Signed Rank Test	0.999	H0
For compliance with a legal reporting obligations	$H_0... \eta \geq 4$	Sign Test for Median	0.798	H0
	$H_1... \eta < 4$	Wilcoxon Signed Rank Test	0.488	H0
To monitor the execution of the financial plan	$H_0... \eta \geq 4$	Sign Test for Median	1.000	H0
	$H_1... \eta < 4$	Wilcoxon Signed Rank Test	0.999	H0
For a comparison with other similar institutions and organizations	$H_0... \eta = 3$	Sign Test for Median	0.388	H0
	$H_1... \eta \neq 3$	Wilcoxon Signed Rank Test	0.108	H0
In order to inform the general public and promoting	$H_0... \eta = 3$	Sign Test for Median	1.000	H0
	$H_1... \eta \neq 3$	Wilcoxon Signed Rank Test	1.000	H0
For the purposes of internal and external audit and control	$H_0... \eta = 4$	Sign Test for Median	0.359	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.457	H0

Source: empirical research

Table 2. Sign tests for median and Wilcoxon Signed Rank Test results based on survey results for usage of internal reports - SLOVENIA

Management usage of internal reports	Statistical hypotheses	Statistical test	p-value	Decision, significance level 1%
As an important source of information for decision making and governance	$H_0... \eta = 5$ $H_1... \eta \neq 5$	Sign Test for Median	1.000	H0
		Wilcoxon Signed Rank Test	1.000	H0
For compliance with a legal reporting obligations	$H_0... \eta = 5$ $H_1... \eta \neq 5$	Sign Test for Median	0.016	H0
		Wilcoxon Signed Rank Test	0.022	H0
To monitor the execution of the financial plan	$H_0... \eta = 5$ $H_1... \eta \neq 5$	Sign Test for Median	1.000	H0
		Wilcoxon Signed Rank Test	1.000	H0
For a comparison with other similar institutions and organizations	$H_0... \eta = 5$ $H_1... \eta \neq 5$	Sign Test for Median	0.063	H0
		Wilcoxon Signed Rank Test	0.059	H0
In order to inform the general public and promoting	$H_0... \eta = 4$ $H_1... \eta \neq 4$	Sign Test for Median	0.375	H0
		Wilcoxon Signed Rank Test	0.138	H0
For the purposes of internal and external audit and control	$H_0... \eta = 5$ $H_1... \eta \neq 5$	Sign Test for Median	0.031	H0
		Wilcoxon Signed Rank Test	0.036	H0

Source: empirical research

- In next question we wanted to test the ranking of different decisions for which they use internal reports.

Table 3. Sign tests for median and Wilcoxon Signed Rank Test results based on survey results for usage of internal reports for different decisions- CROATIA

Usage of internal reports for different decisions	Statistical hypotheses	Statistical test	p-value	Decision, significance level 1%
For the award and allocation of budget funds	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	1.000	H0
		Wilcoxon Signed Rank Test	0.505	H0
For the approval of the implementation of individual programs	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	0.481	H0
		Wilcoxon Signed Rank Test	0.913	H0
To determine the price of public health services	$H_{0...}\eta = 3$ $H_{1...}\eta \neq 3$	Sign Test for Median	0.839	H0
		Wilcoxon Signed Rank Test	0.700	H0
For the purchase of asset	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	0.824	H0
		Wilcoxon Signed Rank Test	0.837	H0
For planning and cost control	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	0.021	H0
		Wilcoxon Signed Rank Test	0.030	H0
For employment decisions	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	0.263	H0
		Wilcoxon Signed Rank Test	0.028	H0
To measure the effectiveness of the services provided	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	0.455	H0
		Wilcoxon Signed Rank Test	0.141	H0
To monitor the effectiveness of the services provided and fiscal responsibility	$H_{0...}\eta = 4$ $H_{1...}\eta \neq 4$	Sign Test for Median	0.359	H0
		Wilcoxon Signed Rank Test	0.324	H0

Source: empirical research

Table 4. Sign tests for median and Wilcoxon Signed Rank Test results based on survey results for usage of internal reports for different decisions - SLOVENIA

Usage of internal reports for different decisions	Statistical hypotheses	Statistical test	p-value	Decision, significance level 1%
For the award and allocation of budget funds	$H_0... \eta = 4$	Sign Test for Median	0.500	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.371	H0
For the approval of the implementation of individual programs	$H_0... \eta = 4$	Sign Test for Median	0.500	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.371	H0
To determine the price of public health services	$H_0... \eta = 4$	Sign Test for Median	0.375	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.225	H0
For the purchase of asset	$H_0... \eta = 4$	Sign Test for Median	0.250	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.181	H0
For planning and cost control	$H_0... \eta = 4$	Sign Test for Median	0.031	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.036	H0
For employment decisions	$H_0... \eta = 4$	Sign Test for Median	1.000	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.789	H0
To measure the effectiveness of the services provided	$H_0... \eta = 4$	Sign Test for Median	1.000	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.789	H0
To monitor the effectiveness of the services provided and fiscal responsibility	$H_0... \eta = 4$	Sign Test for Median	1.000	H0
	$H_1... \eta \neq 4$	Wilcoxon Signed Rank Test	0.789	H0

Source: empirical research

Conclusion

- According to conducted research of legal accounting frameworks in Croatia and Slovenia it can be concluded that in Slovenia healthcare institutions are recording business events on accrual basis.
- Reporting to the relevant ministries and the founders of healthcare institutions is carried out on the cash basis.
- It can be concluded that Slovenian public hospitals have a predisposition to provide fully relevant and reliable information basis needed for making economic decisions at the micro level, as well as economic, social and political decisions at the macro level.
- They can also provide comprehensive information that will enable effective control of disposal of public goods and help the development of financial management by introducing standards of accountability.

- It can be concluded that in the Croatian public hospitals recording of business events and reporting is carried out according to the modified accrual basis which greatly complicates monitoring the efficiency and financial sustainability of public hospitals.
- From the research results, it can be concluded that management of public hospitals in both countries are using mostly internal reports for decision – making and governance and for compliance with a legal reporting obligation and to monitor the execution of the financial plan and then for the purposes of internal and external audit and control.