

THE IMPACT OF DIGITALIZATION IN PUBLIC ADMINISTRATION IN KOSOVO

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Abstract

The purpose of this study is to identify the impact of digitalization on reducing costs and time savings. The methodology used for this study is regression model and Pearson correlation analysis. Primary data were used to conduct the research with total 313 observations using Likert-scale method. Digitalization is used as independent variable while reducing costs and time savings are used as dependent variables. Based on the results at significance level at 0.000 the digitalization has significant impact on reducing costs and time savings. Public administration management, researchers and other related parties can use the results to determine the effect of digitalization on reducing costs and time savings.

Keywords: digitalization, administration, reducing costs, time savings.

JEL Classification: H83, K23

1. Introductory considerations

Digitalization of the administration today is a necessary to ensure fast and high-quality services from administration to the citizens, digitalization is designed to raise convenience of the people, simplify the administration, and improve efficiency and transparency of it, through the use of IT in every field of the administration and review of existing systems and practices.² Digitalization of public administration remains a high priority of the Republic of Kosovo which process is defined as an effort to bring about changes or transformations in the administration and making it more rational and efficient in providing better services to citizens. Digitized administration is defined as an innovation that brings different things to different people.³

The study proposes is to analysis digital public administration effectiveness, based mainly on the criteria of minimizing the costs associated with the introduction of digital services and improving the quality of the administration service. The digitalization of the administration, although it is a late process as far as it has been implemented, has shown a success in abolishing bureaucratic and inconvenient procedures by trying to develop simple, transparent and convenient administrative procedures for the citizens.

The digitalization of the administration in Kosovo has been assessed as an important process which has influenced the facilitation of the procedures foreseen for the receipt of services by the citizens. The application of the electronic form of administrative services offers many opportunities for clients and enables the use of an advanced system in the relations between the administration and the citizens.⁴ Electronic administration services in Kosovo according to research has reduced costs and makes it possible to differentiate contracted services. It has been ascertained that electronic services or digitalized administration has rapidly influenced the positive assessment of efficiency increase by the administration due to the fact that electronic services as a result of digitalized administration can be provided at any time that suits citizens and this undoubtedly has influenced the expression of citizens' satisfaction with the work of the administration.⁵

Before the digitalization of the administration in Kosovo starts, the citizens were faced with many problems in various areas, starting from the basic information related to the competence of the Municipalities to issue basic documents to the citizens, and now this challenge has been overcome through the unification of the digital system that citizens from any municipality can have access to

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² Silvia Matern, Gabriela Savova, Denica Goleva, Velizar Shalamanov, *Human Factor in Digitalization and Cyber Resilience of Public Administration*, 2019.

³ Rob Kling, *Computerization and Social Transformation*, Indiana University p.1.

⁴ Balkan Policy Research Group, *Public Administration Reform in Kosovo*, 2020.

⁵ The Strategy for Modernization of the Public Administration, Ministry of Public Administration, 2020.

the issuance of documents at any time and at any time in any municipality where they are located regardless of which municipality they belong to or where they are registered with ID. The generation of documents is done automatically by electronic devices that are placed by the administration at the service of citizens 24/7 with only one scan of ID which process takes a maximum of 60sec.

The efficiency of the digitalized administration is increasing dizzyingly in addition to the increasing use of the Internet by citizens as a basic means of communication. In addition to the advantages foreseen and elaborated in this paper with the innovations in the administration, there are also difficulties in the implementation of these innovations in the administration, such as continuous training of staff for the use of electronic devices, instruction of civil society in the use of electronic devices which has been a challenge especially for the older generations who initially considered these processes as a blockade in the work of the administration, regarding innovations in the field of administration have been raised concerns by civil servants of the administration who have shown their fear that Innovations in the administration and its digitalization will cut jobs and will lead to possible reorganizations within it.⁶ Adaptation and approval of laws⁷ by the government is considered to be a challenge related to the development of digitalization in the public administration too.

This study is prepared to research and evaluate the role and the performance of digitalization in administration in Kosovo. Based on the elaboration of the above innovation, this research aims to develop and explain the effect of digitalization in administration in Kosovo.

2. Hypothesis and research methodology

Based on the literature hypothesis for this research paper are:

H1: Digitalization of public administration has impact on time savings

H2: Digitalization of public administration has impact on reducing costs

Primary data were used to conduct this research paper. Special questionnaire was prepared to collect the data for testing the hypothesis. Total observations are 313. Method used for this research is Likert Scale as it is the most appropriate method for primary data analysis.⁸

Econometric model used for this research paper and for testing the hypothesis is simple linear regression model:

$$RC = B_0 + B_1DIG + \varepsilon;$$

Description of the model:

RC = Reducing Costs - dependent variable;

B₀ = Constant or Intercept;

B_i = Regression Coefficient;

DIG = Digitalization;

ε = Error Ratio.

$$TS = B_0 + B_1DIG + \varepsilon;$$

Description of the model:

TS = Time Savings - dependent variable;

B₀ = Constant or Intercept;

B_i = Regression Coefficient;

DIG = Digitalization;

ε = Error Ratio.

3. Study results

In table 1 is shown descriptive statistics where N statistics shows the number of observations

⁶ Elina Sidorenko, Igor Bartsits, Zarina Khisamova, 2019. *The Efficiency of Digital Public Administration Assessing: Theoretical and Applied Aspects*.

⁷ Law for Administration Procedure in Kosovo, No. 02/L-28.

⁸ Gliem, J.A., & Gliem, R.R. (2003). *Calculating, interpreting, and reporting cronbach's alpha reliability coefficient for likert-type scales. Midwest Research to Practice Conference in Adult, Continuing, and Community Education*. Florian Emese, Dreptul familiei. Căsătorie. Regimuri matrimoniale. Filiația, C.H. Beck, Bucharest, 2018.

participated in the research continuing with minimum and maximum rankings of Likert Scale. In table 1 it is also shown mean, standard deviation and variance.

Table 1. Descriptive Statistics

	Digitalization	Time Saving	Reducing Costs	Valid N (listwise)
N Statistic	313	313	313	313
Minimum Statistic	3	1	1	
Maximum Statistic	5	5	4	
Mean Statistic	4.291	2.994	2.767	
Mean Std. Error	0.028	0.0429	0.0394	
Std. Deviation Statistic	0.4953	0.7595	0.6979	
Variance Statistic	0.245	0.577	0.487	

SPSS v.25

The value of correlation coefficient R is 0.697 which means the strong correlation between independent and dependent variable. Adjusted R square expresses that dependent variable digitalization can be explained by the independent variable reducing costs by 0.485 or 48.5%.

Table 2. Model Summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.697 ^a	.486	.485	.5010	.486	294.580	1	311		.000

a. Predictors: (Constant), Digitalization
 b. Dependent Variable: Reducing Costs

SPSS v.25

The value of correlation coefficient R is 0.516 which means the strong correlation between independent and dependent variable. Adjusted R square expresses that dependent variable digitalization can be explained by the independent variable time saving by 0.264 or 26.4%.

Table 3. Model Summary

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.516 ^a	.266	.264	.6516	.266	112.936	1	311		.000

a. Predictors: (Constant), Digitalization
 b. Dependent Variable: Time Saving

SPSS v.25

Table 4. Coefficient

Model	Coefficients ^a									
	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial Part	Tolerance	VIF	
1 (Constant)	-.402	.322		-1.251	.212					
Digitalization	.791	.074	.516	10.627	.000	.516	.516	.516	1.000	1.000

a. Dependent Variable: Time Saving

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Table 4 shows independent variable digitalization has significant impact on time saving at significance level of 0.000. While regression coefficient of digitalization is 0.791 which means that the time savings effect is 79.1%. Based on the significance level 0.000 the hypothesis 1 (*H1: Digitalization of public administration has impact on time savings*) is approved.

In table 5 is shown that the independent variable digitalization has significant impact on reducing costs at significance level of 0.000. Regression coefficient of digitalization is 0.983 which means that the reducing costs effect is 98.3% due to digitalization of administration. Based on the significance level 0.000 the hypothesis 2 (*H2: Digitalization of public administration has impact on reducing costs*) is approved.

Table 5. Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1(Constant)	-1.450	.247		-5.863	.000					
Digitalization	.983	.057	.697	17.163	.000	.697	.697	.697	1.000	1.000

a. Dependent Variable: Reducing Costs

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Table 6 results shows the Pearson Correlation between the dependent variable digitalization and independent variable reducing costs. The result of 0.697 shows that these variables have strong positive correlation which means that an increase of digitalization will increase reducing costs. This result is also supported by significance level at 0.000.

Table 6. Model Summary

Correlations			
		Reducing Costs	Digitalization
Pearson Correlation	Reducing Costs	1.000	.697
	Digitalization	.697	1.000
Sig. (1-tailed)	Reducing Costs	.	.000
	Digitalization	.000	.
N	Reducing Costs	313	313
	Digitalization	313	313

SPSS v.25

Table 7. Model Summary

Correlations			
		Time Saving	Digitalization
Pearson Correlation	Time Saving	1.000	.516
	Digitalization	.516	1.000
Sig. (1-tailed)	Time Saving	.	.000
	Digitalization	.000	.
N	Time Saving	313	313
	Digitalization	313	313

SPSS v.25

According to table 7 there is a positive correlation between the variable digitalization and variable time saving. The result of 0.516 shows that these variables have strong positive correlation which means that an increase of digitalization will increase time savings. This result is also supported by significance level at 0.000.

4. Conclusions

The research paper identified the impact of digitalization as independent variable on reducing costs and time savings as dependent variables. The results of the study show that digitalization at significant level at 0.000 has significant impact on reducing costs and time savings. As a result the both hypothesis are approved. Regarding the Pearson correlation between the two variables, the results show that the digitization variable has a positive correlation with reducing costs and also the digitization variable has a positive correlation with time saving.

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