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Contents

Public Attitudes towards Surveillance and Privacy in Western Balkans: The Case of Serbia

Abstract:
As a part of the larger project that covers Western Balkan countries, this paper investigates the attitudes of Serbian citizens towards privacy, data protection, surveillance and security. It examines which segments of population with similar attitudes towards surveillance and privacy exist in this country, and can they be differentiated by demographic characteristics. The empirical analysis was based on public opinion survey with the nationally representative sample of 500 Serbian citizens. The findings indicate that Serbian citizens showed the highest concern about personal data manipulation, and they seem to be cautious about the effectiveness of surveillance, but some of them expressed the need for surveillance enforcement. There are three groups of citizens with similar attitudes: (1) citizens concerned about data and privacy protection, (2) pro-surveillance oriented citizens, (3) citizens concerned about being surveilled. Identified groups of citizens differ in age, education, and employment status. The empirical results of this paper could be used for comparison with other Western Balkan countries, and might be taken into consideration in the design of policies related to privacy, security, surveillance and data protection.

Keywords: privacy, data protection, security, surveillance, Serbia
JEL classification: M38, D18, K49

Stavovi javnosti o nadzoru i privatnosti u zemljama Zapadnog Balkana: Srbija

Sažetak:
Kao dio većeg projekta koji uključuje zemlje Zapadnog Balkana, u ovom se radu ispituju stavovi javnosti o nadzoru, praćenju, zaštiti podataka i zaštiti privatnosti u Srbiji. Istražuje se postoje li skupine građana sa sličnim stavovima i razlikuju li se s obzirom na demografska obilježja. Empirijska analiza provedena je na podacima prikupljenima anketom na nacionalno reprezentativnom uzorku od 500 građana. Rezultati istraživanja pokazuju da su građani najviše zabrinuti zbog manipulacije osobnim podacima i oprezni kada je riječ o učinkovitosti nadzora, dok neki izražavaju potrebu za pojačanim nadzorom. S obzirom na stavove građana, identificirane su tri skupine ispitanika: (1) građani zabrinuti za zaštitu podataka i privatnosti, (2) građani koji zagovaraju nadzor i (3) građani zabrinuti zbog nadzora koji se nad njima provodi. Između skupina ispitanika utvrđene su statistički značajne razlike u dobi, obrazovanju i statusu zaposlenja. Rezultati istraživanja mogu se koristiti za usporedbu s drugim zemljama Zapadnog Balkana, i poslužiti za kreiranje javne politike u području privatnosti, sigurnosti, nadzora i zaštite podataka.

Ključne riječi: privatnost, zaštita podataka, sigurnost, nadzor, Srbija
JEL klasifikacija: M38, D18, K49

1 Introduction[1]

Past research indicates that the issues related to privacy, surveillance, security and data protection are gaining in importance and have become hot political issues (European Commission, 2011; Solove, 2008; Haggerty and Ericson, 2006; Dinev et al., 2005). This is particularly evident in Serbia, the Western Balkan country that is currently going through the process of harmonizing its legislative framework with the EU legislation. In spite of its legal regulation efforts, Serbia is lagging behind the EU institutional standards in data protection, and people seem to be poorly informed about the misuse of information and related risks. Furthermore, there is an ongoing debate on different aspects of regulation and its implementation among Serbian scholars and experts. Ružić (2011) argues that video surveillance in Serbia is not adequately regulated to protect privacy, as well as human rights in the democratic society. A lot of the discussions are related to various specific legal issues and practice of surveillance, privacy and data protection (e.g. Nikolić, 2010; Milošević and Matić, 2007; Živković, 2006). Serbian public seems to be particularly interested in privacy, surveillance, security and data protection issues. Therefore, understanding how individuals perceive privacy, surveillance, security and data protection has become crucial for policy-makers and for the public as well.

The current paper explores the attitudes of Serbian citizens towards privacy, surveillance, security and data protection. The research aims to answer two main questions: (1) What is the public opinion on privacy, surveillance, data protection and security? (2) What segments of population with similar attitudes towards surveillance and privacy exist, and could these segments be differentiated by demographic characteristics?

This study builds on the literature related to privacy, surveillance, data protection and security (Goold, 2009; Solove, 2008; 2006). It contributes to this stream of research by applying the privacy and surveillance 43-items instrument (previously developed and tested in Croatia) in the Serbian environment. The research develops the typology of Serbian citizens and identifies the differences among the groups of citizens. It is a part of a larger project aiming to investigate public attitudes towards surveillance and privacy in Western Balkan countries. The first phase of the project included the exploratory research in Croatia and creation of the Surveillance/Privacy Concern Survey in spring 2011 (Budak, Anić and Rajh, 2011). The same survey was conducted in Serbia in the fall 2011. To authors' knowledge this is the first research of such type conducted in Serbia.

Although there are many theoretical papers which introduce various definitions and different approaches in assessing those concepts from legal and ethical viewpoints (Wirtz, Lwin and Williams, 2007), there is a general lack of empirical research on privacy, surveillance, security and data protection. Due to the fact that citizens' concerns vary across cultures, countries and demographic characteristics (European Commission, 2011;

[1] The research was conducted by authors within the internal project of the Institute of Economics, Zagreb. The first version of the study conducted in Serbia was presented at the "COST Action LiSS Annual Conference 3: The State of Surveillance", Barcelona, Spain, May 31, 2012.

McCahill and Finn, 2010; Dinev et al., 2005; Haggerty and Gazso, 2005), more national and cross-national empirical research is needed, which calls for such an analysis in Serbia too.

From a policy viewpoint, such public opinion survey might play an important role in framing the public debate in Serbia. Rapid institutional changes, together with political efforts to join the EU and actual economic crisis bring into focus the issues of privacy, surveillance, data protection and security. In the new environment, those issues are not adequately explored which motivated us to address public attitudes towards surveillance, privacy, security and data protection in Serbia.

Next section describes the theoretical background for this attitudinal study. It builds on the literature related to privacy, surveillance, data protection and security (Goold, 2009; Solove, 2008; 2006). The methodology applied is presented in Section 3. The results of empirical analysis are provided in Section 4. The concluding section offers preliminary policy recommendations and outlines future comparative research.

2 Theoretical Background

Previous research has examined various aspects of privacy, including the research on awareness of how private/public sectors are protecting privacy; reaction to specific privacy protection measures; privacy and national security relationship, harmonization of privacy standards; the importance of privacy, public opinion trends, privacy concern and the need for government surveillance and privacy regulation (e.g. Goold, 2009; Wirtz, Lwin and Williams, 2007; Zureik, 2004; Patton, 2000). As privacy, data protection, security and surveillance are hot political issues in Serbia, it is interesting to examine citizens' attitudes towards them.

In everyday communication, terms privacy, data protection and security are often considered to have the same meaning. However, there are differences among those concepts (Nikolić, 2010). There is no universal definition of privacy. It is an all-encompassing concept that includes a whole host of human concerns about various forms of intrusive behavior, including wiretapping, surreptitious physical surveillance, and mail interception. Some research clusters privacy around the following six dimensions: (a) the right to be let alone; (b) limited access to the self; (c) secrecy; (d) control of personal information; (e) personhood; and (f) intimacy (Solove, 2008). Privacy is recognized as an individual right, but also as a social and political value (Solove, 2008). Our research covers four principal groups of "socially recognized privacy violations" including i) information collection (surveillance), ii) information processing (insecurity, secondary use of information, exclusion), iii) information dissemination (breach of confidentiality), and iv) invasion (intrusion) (Solove, 2006).

Our research focuses on whether Serbian citizens are concerned about privacy protection and data protection, i.e. two components of the protection of personal information. Data protection encompasses the rules that regulate the collection, maintenance, use and disclosure of personal information. The expansion of information technologies and the growing use of computers increased the threats to privacy and have placed increasing demands on data protection (European Commission, 2011). There is a debate on how to protect data and how much security is reasonable. The issue of data protection, privacy and security is important not only for individuals, but for the whole country as well (Nikolić, 2010).

Nowadays, surveillance expansion is becoming a hot issue. As the level of surveillance in society increases, it becomes difficult for individuals to maintain their identities and many people are deeply concerned about the spread of surveillance. Surveillance is criticized for its chilling effect on people's behavior and too much social control can adversely impact freedom, creativity, and self-development (Solove, 2006). Surveillance can be defined as the monitoring of behavior, activities, or other changing information, usually of people for the purpose of influencing, managing, directing, or protecting. In this paper we examine if public attitudes towards surveillance in Serbia are in favor of the "nothing to hide argument". Goold (2010) argues that citizens would demand less surveillance when experiencing state surveillance as threat to political rights and democracy. Otherwise, some would opt in favor of surveillance as an effective deterrent to crime, which makes it more socially acceptable.

Finally, this research develops a typology of Serbian citizens and examines the differences among them. Past research has proposed several typologies of individuals based on citizens' attitudes (Table 1).

Table 1 **Typology of Individuals with Respect to Their Attitudes towards Privacy, Surveillance, Data Protection and Security**

Research	**Groups of citizens identified**
Haggerty and Gazso (2005)	(1) individuals concerned about increasing surveillance and (2) pro-surveillance oriented individuals
Wirtz, Lwin and Williams (2007)	(1) citizens who show less concern for internet privacy (2) citizens who show more concern for internet privacy
Gandy (2003)	(1) highly concerned group of respondents - "privacy fundamentalists" (2) moderates - "the pragmatic majority", (3) low concern group - "the unconcerned".
The European survey (European Commission, 2011)	(1) "digital natives" (2) "digital initiates"
Budak, Anić and Rajh (2011)	(1) "pro-surveillance" oriented citizens; (2) citizens concerned about being surveilled; (3) citizens concerned about data and privacy protection

With respect to different attitudes (e.g. more or less concerned about privacy and surveillance), individuals are likely to express different modes of behavior. There are also socio-demographic differences among citizens (European Commission, 2011; McCahill and Finn, 2010). These must be taken into consideration when designing policies related to privacy, data protection, security and surveillance.

3 Methodology

This research is based on the quantitative research survey. The questionnaire was developed in the first phase of a larger research conducted in Croatia. The development of the questionnaire was based on interviews with experts in the field of data protection, security and privacy, and literature review as well (Budak, Anić and Rajh, 2011). The original Croatian questionnaire was translated into Serbian and was employed in Serbia. Serbian questionnaire is provided in the Appendix.

The target sample in the territory of the Republic of Serbia included 500 respondents, which gives the standard error of around 2.2 percent. The nationally representative sample was drawn on a two-way stratification in terms of regions and population size by gender and age. The sample allocated to each stratum is proportional to the population living in each stratum. The sample characteristics by regions in Serbia are shown in Table 2.

Table 2 **Survey Sample by Serbian Regions, n= 500**

	Region	**n**	**%**
1	Belgrade	105	21.0
2	Vojvodina	136	27.2
3	Eastern and Southern Serbia	118	23.6
4	Western Serbia and Šumadija	141	28.2

Data were collected by telephone survey in October 2011. A multistage design was used in developing the sample. Pages from the telephone book containing names and addresses of potential respondents were selected using a systematic sampling procedure, while a simple random sampling technique was employed to choose potential respondents within the selected telephone book pages. The required time to complete an interview was less than 20 minutes. The net sample size contained 500 respondents of age 18 to 70. The summary statistics on sampled respondents is presented in Table 3.

The 49 percent of respondents were male and 51 percent of them were female. The average age of respondents was 44 years. The respondents reported an average household net monthly income of 57,116 RSD (approximately 510 EUR). The majority of respondents had completed secondary school (60 percent).

The measurement instrument included 43 questions. The survey included questions about the public opinion on data collection conducted by private companies and institutions, data storage and security, data usage, data disclosure and dissemination done by private companies and institutions, privacy protection policies, legislation and government protection, citizens' privacy concern, effectiveness of Closed Circuit Television (CCTV) and other methods of surveillance, as well as citizens' patterns of

behavior. Each item in the questionnaire was measured by Likert-scaled items, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 3 **Summary Statistics of Sampled Respondents, n = 500**	
Respondent profile	
1 Gender (in %)	
1.1 Male	48.8
1.2 Female	51.2
2 Average age (in years)	44.1
3 Average number of people in a household	3.8
4 Educational level (%)	
4.1 Primary school	13.6
4.2 Secondary school	60.0
4.3 University and higher education	26.4
5 Average household net monthly income*, n=227	57,116.7
6 Employment status (%)	
6.1 Employed	41.6
6.2 Non-employment status	58.4

*Note: * In Serbian dinar, 1 EUR=111.95 RSD (May 3, 2012), National Bank of Serbia, http://www.nbs.rs.*

Demographic variables include gender, age, household size, household income, education, and employment status. The gender of the respondents was coded as 1 for male and 2 for female. The respondents reported their age in years, number of persons in the household (household size), household income (in local currency RSD) and place of residence. Education was coded as follows: (1) primary school or less, (2) secondary school, and (3) university or higher degree of education. Regarding employment, the respondents were asked whether they were employed or not.

The collected data were first analyzed in a descriptive manner to determine the public opinion on privacy and surveillance in Serbia. Cronbach alpha coefficients were calculated to quantify the scale reliabilities. As the second step, exploratory factor analysis was used to identify the factors of surveillance/privacy concern. Then, K-means cluster analysis was employed to determine the segments of population with similar attitudes, while the differences in respondents' attitudes towards privacy and surveillance between segments were analyzed using the chi-square test.

4 Results

The first step in the analysis was the assessment of construct validity and reliability of scales. The initial measurement instrument of 43 questions was tested using the exploratory factor analysis in order to explore the underlying structure among analyzed variables and to identify sets of variables that highly interrelated, i.e. factors. Principal components analysis was employed to extract the factors. This factor extraction method

was used in order to summarize most of the original variance in a minimum number of factors because data reduction was of primary concern in our research. The Kaiser-Guttman rule was used to determine the number of factors to extract. The first run of exploratory factor analysis indicated that there were 20 items of low factor loading on the respective factor, low factor loadings on all factors, and high factor loading on some other factor (i1, i2, i8, i9, i11, i12, i13, i15, i17, i18, i20, i23, i26, i27, i29, i30, i31, i33, i40, and i43). These items were excluded from further analysis. In the second run, the exploratory factor analysis indicated six distinct factors, explaining 58 percent of the total variance. The factor loadings are greater than 0.50, which is considered sufficient (Bagozzi and Yi, 1988). Factors were labeled according to dominant variables in the factor as follows: Factor 1 (i32, i34, i35): Perceived surveillance effectiveness; Factor 2 (i36, i37, i38, i39): Concern about being surveilled; Factor 3 (i3, i4, i5, i6, i7, i10): Trust in privacy protection procedures, Factor 4 (i14, i16, i19, i21): Concern about CCTV privacy intrusion; Factor 5 (i28, i41, i42): Concern about personal data manipulation; Factor 6 (i22, i24, i25): Need for surveillance enforcement (Table 4).

Table 4 **Factor Analysis Results, Factor Loadings**

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	Perceived surveillance effectiveness	Concern about being surveilled	Trust in privacy protection procedures	Concern about CCTVs privacy intrusion	Concern about personal data manipulation	Need for surveillance enforcement
i3			0.60			
i4			0.63			
i5			0.56			
i6			0.69			
i7			0.74			
i10			0.60			
i14				0.75		
i16				0.75		
i19				0.75		
i21				0.70		
i22						0.65
i24						0.63
i25						0.70
i28					0.60	
i32	0.83					
i34	0.89					
i35	0.88					
i36		0.89				
i37		0.88				
i38		0.76				
i39		0.68				
i41					0.71	
i42					0.58	

Reliability of scales was assessed using Cronbach alpha coefficients which represent a measure of internal consistency of a set of items. Following the standard procedure

recommended by Churchill (1979), the items that decreased Cronbach alpha coefficients of respective scales were deleted from further analysis (i22, i39), in order to improve the Cronbach's alpha coefficients. Final Cronbach's alpha coefficients were in the range 0.37-0.87 and indicate an acceptable level of reliability (Table 5).

Table 5 **Reliability Assessment**

Items	Cronbach alphas if deleted
Factor 1: Perceived surveillance effectiveness/Cronbach Alpha for subscale: 0.87	
i32	0.84
i34	0.77
i35	0.81
Factor 2: Concern about being surveilled/Cronbach Alpha for subscale: 0.83	
i36	0.73
i37	0.73
i38	0.81
i39	0.85
Factor 3: Trust in privacy protection procedures/Cronbach Alpha for subscale: 0.74	
i3	0.71
i4	0.72
i5	0.72
i6	0.68
i7	0.67
i10	0.72
Factor 4: Concern about CCTVs privacy intrusion/Cronbach Alpha for subscale: 0.74	
i14	0.67
i16	0.69
i19	0.68
i21	0.71
Factor 5: Concern about personal data manipulation/Cronbach Alpha for subscale: 0.37	
i28	0.19
i41	0.23
i42	0.37
Factor 6: Need for surveillance enforcement/Cronbach Alpha for subscale: 0.58	
i22	0.67
i24	0.35
i25	0.37

Confirmatory factor analysis (CFA) was performed to test the convergent and discriminant validity of measures and to detect the unidimensionality of each construct. With confirmatory factor analysis the extent to which a priori pattern of factor loadings represents the actual empirical data was tested. Unidimensionality is evidence that a single trait or construct underlies a set of measures (Gerbing and Anderson, 1988). The specified measurement model included six uncorrelated factors with uncorrelated measurement errors. The goodness-of-fit index (GFI) and adjusted goodness-of-fit index (AGFI) were 0.954 and 0.940, respectively. The normed fit index (NFI), non-normed fit index (NNFI), and comparative fit index (CFI) were 0.919, 0.967, and 0.973 respectively.

Although the chi-square test was significant, it is important to note that it is sensitive to sample size. Other model fit indices indicated a reasonable level of fit of the model (Hu and Bentler, 1999). The values of fit indices obtained from the six-factor model represent a substantial improvement over the values obtained from a one-factor model. The results of confirmatory factor analysis indicate an acceptable level of convergent and discriminant validity, as well as unidimensionality (Table 6).

Table 6 **Confirmatory Factor Analysis Results**

Fit indices	**One-factor model**	**Six-factor model**
Goodness-of-fit index (GFI)	0.664	0.954
Adjusted goodness-of-fit index (AGFI)	0.596	0.940
Normed fit index (NFI)	0.348	0.919
Non-normed fit index (NNFI)	0.305	0.967
Comparative fit index (CFI)	0.368	0.973

K-means cluster analysis was employed to classify citizens according to their attitudes towards surveillance and privacy issues. The Hartigan index was used as a criterion for determining the number of clusters in a data set. Mean values were calculated for each factor using only the items that remained after the reliability and construct validity assessment. These mean values were taken as an input in the K-means cluster analysis. The K-means cluster analysis indicated three homogeneous segments of citizens (Table 7).

Table 7 **K-means Cluster Results (means)**

	Sample average (n= 500)	**Segment 1: Citizens concerned about data and privacy protection (n=184)**	**Segment 2: Pro-surveillance oriented citizens (n=166)**	**Segment 3: Citizens concerned about being surveilled (n=150)**	**ANOVA**
Factor 1: Perceived surveillance effectiveness	3.4	2.4	3.8	4.1	F=141.27 p=0.000
Factor 2: Concern about being surveilled	2.9	2.7	1.8	4.3	F=307.99 p=0.000
Factor 3: Trust in privacy protection procedures	3.0	2.7	3.2	3.4	F=35.80 p=0.000
Factor 4: Concern about CCTVs privacy intrusion	2.2	2.3	1.8	2.5	F=19.33 p=0.000
Factor 5: Concern about personal data manipulation	3.9	3.9	3.7	4.1	F=9.23 p=0.000
Factor 6: Need for surveillance enforcement	3.3	2.0	4.0	4.1	F=338.71 p=0.000

Note: Items were measured on the scale ranging from 1-strongly disagree to 5-strongly agree.

On average, citizens in Serbia showed the highest concern about personal data manipulation (mean= 3.9). They were cautious about the effectiveness of surveillance (mean=3.4), and the need for surveillance enforcement (mean=3.3). The respondents had trust in privacy protection procedures (mean=3.0). However, they were less concerned about being surveilled (mean=2.9) and about CCTV privacy intrusion (mean=2.2).

The differences between the groups in the analyzed factors were significant at the 0.01 level. The groups were labeled according to the cluster means, as follows: Segment 1: Citizens concerned about data and privacy protection; Segment 2: Pro-surveillance oriented citizens; Segment 3: Citizens concerned about being surveilled. Citizens concerned about data and privacy protection were concerned with the personal information stored on computers, which might be misused. They are bothered by the fact that personal information might be shared and used for marketing purposes, and would immediately report any misuse of their personal data. Segment 2 includes citizens who support surveillance with CCTV cameras, surveillance carried out by school officials and the police as well. Segment 3 includes individuals most concerned about being surveilled. They are very careful when they talk on the phone and in public places, and when they write e-mails.

Cross tabulation analysis (chi-square test) was used to determine differences between segments of citizens in gender, age, education and employment status. Chi-square test results are presented in Table 8.

Table 8 **Demographic Differences and Pearson Chi-Square Test**

Demographics	Segment 1: Citizens concerned about data and privacy protection (n=184)	Segment 2: Pro-surveillance oriented citizens (n=166)	Segment 3: Citizens concerned about being surveilled (n=150)
Gender (Pearson chi-square: 0.17, df=2, p=0.919) (in %)			
Male	50.0	48.2	48.0
Female	50.0	51.8	52.0
Age (Pearson chi-square: 6.77, df=2, p=0.034) (in %)			
18-46	60.9	55.4	46.7
47-70	39.1	44.6	53.3
Education (Pearson chi-square: 23.97, df=2, p=0.000) (in %)			
Primary school or less	5.4	14.5	22.7
Secondary school	63.0	57.8	58.7
Higher education	31.5	27.7	18.7
Employment status (Pearson chi-square: 7.72, df=2, p=0.021) (in %)			
Employed	48.9	40.4	34.0
Unemployed	51.1	59.6	66.0

Chi-square test results show significant differences between groups of citizens in age and employment status ($p<0.05$) and education ($p<0.01$). There are no significant gender differences between groups.

Older individuals prevailed in Segment 3, while younger citizens prevailed in Segment 1. Compared to older individuals, younger individuals tend to be more concerned about personal data manipulation. On the other hand, older citizens seem to be more concerned about being surveilled.

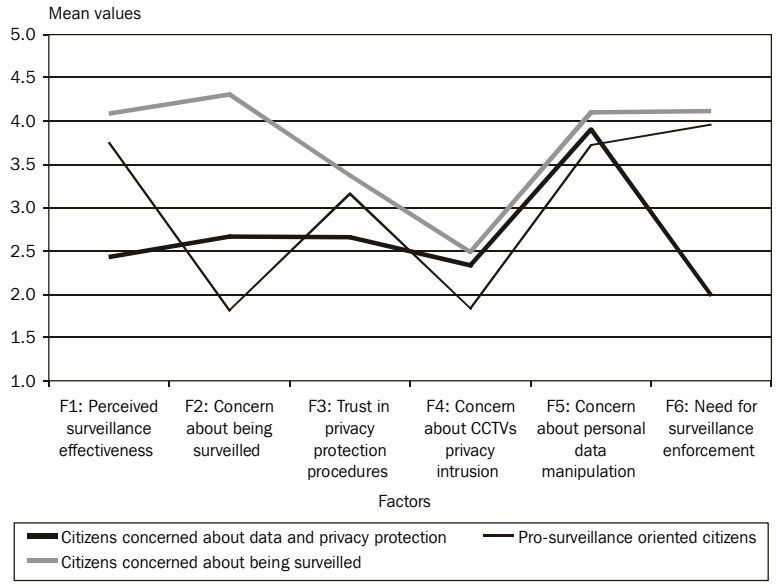
The groups of citizens also differ significantly in their education levels. Citizens with higher education are more concerned about data and privacy protection, while those with primary school or less are more concerned about being surveilled. Compared to employed citizens, higher percentage of unemployed citizens was found to be more concerned about being surveilled.

5 Discussion and Conclusions

Current paper examined public attitudes towards privacy and surveillance in Serbia. The factor analysis produced six distinct factors: (1) perceived surveillance effectiveness, (2) concern about being surveilled, (3) trust in privacy protection procedures, (4) concern about CCTV privacy intrusion, (5) concern about personal data manipulation and (6) the need for surveillance enforcement. The findings indicate that Serbian citizens showed the highest concern about personal data manipulation, and were cautious about the effectiveness of surveillance, and yet some express the need for surveillance enforcement.

An important implication of the study's results is that it reveals different public attitudes towards privacy and surveillance (Figure 1).

Figure 1 **Clustering Serbian Citizens According to Their Attitudes towards Surveillance and Privacy**



Cluster analysis identified three groups of citizens: citizens concerned about data and privacy protection, pro-surveillance oriented citizens, and citizens concerned about being surveilled. Pro-surveillance oriented citizens have the lowest concerns about being surveilled and about the CCTV privacy intrusion, and would opt for more surveillance enforcement because they consider it very effective. Serbian citizens support "nothing to hide" argument when expressing their views in favor of more surveillance cameras as an effective tool to prevent crime (Goold, 2010).

Citizens concerned about being surveilled would also agree on the effectiveness of the surveillance, but contrary to the pro-surveillance cluster, they are very concerned about being surveilled. At first sight their opinion in favor of more surveillance enforcement seems contradictory. However, it relates to those other "bad" people and positively correlates to perceived surveillance effectiveness. All three clusters are not very concerned about the CCTV privacy intrusion, probably because the CCTV cameras are not yet widespread in Serbia, except to the modest extent in bigger cities of Belgrade and Novi Sad. These findings are in line with Goold's (2010) suggestions that citizens would oppose surveillance when experiencing it as a threat to political rights and democracy.

As expected, the third group of citizens concerned about data and privacy protection are people highly concerned about personal data manipulation. Contrary to other two clusters, this group does not consider surveillance very effective and would not enforce it. They have the lowest level of trust in privacy protection procedures, do not care much about being surveilled or exposed to CCTV cameras. These three groups of citizens differ significantly in age, education and employment status, but no significant gender differences were found among groups.

Research results indicate that Serbian citizens strongly agree that personal privacy, security, and data protection are very important to them. There is also a need to enforce surveillance to prevent terrorism and general hazards, and to prevent crime. However, they only partially agree that personal privacy is invaded and inadequately ensured by the existing legislation. Citizens believe that, compared to one decade ago, their privacy is somewhat more respected and protected.

Several practical implications might derive from this study. Although Serbian citizens would immediately report the misuse of their personal data, they are not well informed as to whom they should report this misuse to. Respondents also stated that they are poorly informed about the risks of such a misuse so it calls for public educational campaigns. Both government and private companies should not expect much public criticism if more CCTVs were introduced, especially in the areas potentially exposed to vandalism and crime. Private and public institutions should improve safeguarding of citizens' confident information and should take into consideration demographic differences among groups of citizens when designing policies related to privacy, surveillance, security and data protection.

Although this study produced interesting and comprehensive findings, some limitations need to be pointed out. The survey provides a kind of a "snapshot of citizens" attitudes at one point in time, while new insights could be attained by regularly surveying public attitudes towards privacy and surveillance. It would be also interesting to identify the differences in the attitudes of citizens towards privacy and surveillance with respect to their usage of internet and experiences of data misuse in Serbia, and to compare the opinions of citizens in Serbia with those in other Western Balkan countries.

One could presume that similar public perceptions and opinions exist in other countries of Western Balkans region; or that the public attitudes in other post-socialist societies and EU New Member States follow a rather similar pattern. However, these research questions remain to be explored in comparative case studies.

Appendix

Serbian Surveillance/Privacy Concern Survey - Questionnaire		
1	Protection of my personal privacy is very important to me.	1 2 3 4 5
2	My personal privacy is invaded in Serbia today.	1 2 3 4 5
3	The privacy of citizens in Serbia is more respected and protected today than ten years ago.	1 2 3 4 5
4	My employer safeguards my personal information.	1 2 3 4 5
5	Banks safeguard confident information about their clients.	1 2 3 4 5
6	Government institutions safeguard confidentiality and privacy of the data on citizens and firms they collect.	1 2 3 4 5
7	Government institutions take care of the data protection against fraud and misuse.	1 2 3 4 5
8	Government institutions often ask for more personal data than they actually need.	1 2 3 4 5
9	Private companies and agencies often ask for more personal data than they actually need.	1 2 3 4 5
10	Privacy protection and the usage of personal data in Serbia are adequately ensured by the existing legislation.	1 2 3 4 5
11	I am well informed about the risks of misusing my personal data.	1 2 3 4 5
12	Identity theft might happen in Serbia.	1 2 3 4 5
13	Information I send over the Internet (e-mail, Facebook and other) could be misused.	1 2 3 4 5
14	CCTV cameras in public spaces (streets, squares, stadiums) threaten the privacy of citizens.	1 2 3 4 5
15	CCTV cameras in public spaces (streets, squares, stadiums) prevent crime.	1 2 3 4 5
16	CCTV cameras in public spaces shall be prohibited because they threaten civil rights and liberties of citizens.	1 2 3 4 5
17	CCTV cameras prevent hooligans and vandalism (at stadiums and in public transport, graphite drawing, etc).	1 2 3 4 5
18	CCTV cameras in shops, banks, post offices...are needed since they prevent theft.	1 2 3 4 5
19	CCTV cameras in shops, banks, post offices...threaten the privacy of shoppers and employees.	1 2 3 4 5
20	There is a well-established control of CCTV records regarding persons who have access to view records and what happens with the records afterwards.	1 2 3 4 5
21	I feel uncomfortable in a space under the CCTV cameras supervision.	1 2 3 4 5
22	I would feel safer if I worked and lived in a space under the CCTV cameras supervision.	1 2 3 4 5
23	School officials should be entitled to search students and their belongings for stuff not permitted in school.	1 2 3 4 5
24	The police should have unrestricted access to any data on every citizen.	1 2 3 4 5
25	The police and national security services should be entitled to surveil and tap all persons they rate as suspicious without any special warrant (e.g. permission of the court).	1 2 3 4 5
26	I never tell anybody my passwords, PINs, and codes.	1 2 3 4 5
27	The usage of computers and ICT increases the possibility of personal data manipulation.	1 2 3 4 5
28	I am concerned with the volume of personal information and data stored on computers that might be misused.	1 2 3 4 5
29	Personal medical records, psychological and IQ test results, etc. are not protected enough as private and confidential data.	1 2 3 4 5
30	Serbian citizens are educated enough and are well informed about the risks of unauthorized usage of data and about keeping safety of personal data.	1 2 3 4 5
31	There is a lack of citizens' initiative to protect privacy in Serbia.	1 2 3 4 5
32	Enforced surveillance of people effectively prevents terrorism.	1 2 3 4 5
33	There is a need to enforce surveillance of people in Serbia to prevent terrorism and general hazards.	1 2 3 4 5
34	Enforced surveillance of people effectively prevents crime.	1 2 3 4 5
35	Enforced surveillance of people effectively prevents corruption.	1 2 3 4 5
36	I am careful when talking over the telephone because one could never know if I've been wiretapped.	1 2 3 4 5
37	I am careful when talking over the mobile phone because one could never know if I've been wiretapped.	1 2 3 4 5

38	I am careful when talking in public places because one could never know if I've been tapped.	1 2 3 4 5
39	I am careful when writing e-mails because I am not sure if some third person may access my messages.	1 2 3 4 5
40	Private companies and agencies share my personal data and information with each other without my knowledge.	1 2 3 4 5
41	It bothers me when my personal information is shared and used for marketing purposes.	1 2 3 4 5
42	If I knew about the misuse of my personal data, I would report it immediately.	1 2 3 4 5
43	I know to whom to report the misuse of personal data.	1 2 3 4 5

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