

Public Administration Management and Social Services in Czech Municipalities: Perceived Attitudes of Municipal Officials with the Potential Application of the Smart City Principles

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Abstract: Increasing demand for social services connected to the demographic and other changes of the European society presents serious challenge for public policy makers and for the administrative levels most concerned with social services provision. In the Czech Republic this level is represented by municipalities whose attitudes towards the offer of social services in their territory, the providers and the cooperation in this field were surveyed in this paper. Municipal officials' attitudes to social services differ significantly within the researched sample from a full satisfaction with the present situation in a municipality to a strong dissatisfaction. The paper uses the results of the survey proceed by means of the principal component analysis and cluster analysis to identify the attitudes of the municipal officials in the Zlin Region of the Czech Republic and to divide said municipalities into four groups with similar attitudes and issues for which common policy measures may be adopted after more detailed inquiries into their specific issues. Close monitoring, as provided by this paper, presents detailed basis for local policy makers and the further planning of social services network.

Keywords: cluster analysis, Czech Republic, municipalities, public policy, social services

JEL: J18, H83, O35

Introduction

The field of social services presents a serious challenge for both the private sector, individual citizens and the public administration in virtually every European country. The demographic development and as well as broader global movements of population create increasingly demanding environment for provision of social services. The Czech Republic faces this problem as well as numerous other regions. Bound by its own laws and international laws and treaties the country observes the basic tenets of providing social services, yet is struggling with partial problems such as accessibility, quality, and efficiency of social services,

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incorporation of modern technologies and smart governance concepts as well as with the more systemic question of sustainability of the entire social services system, most obviously the matters of its financing.

With regards to the abovementioned uneasy situation the sector of social services faces, this paper is focused on the field of regional provision of social services. The objective of this paper is to catalogue municipalities of Zlín Region that participated in social services provision related survey according to their satisfaction with the offer of social services in their territory and with the cooperation among the administrative bodies in Zlín Region. This micro view of social services provision at the municipal level serves to distinguish the offer of services for different target groups in the municipalities as well as municipality officials' attitude to the competences of municipalities competences in this field.

1. Theoretical background

The glaring issue of social services in the Czech Republic as well as in other countries is the inability to properly define them. The international research is further hindered by the existence of multiple terms such as human services, social services, welfare services, community services that might in essence describe very similar if not same actions (Wickenden, 1976). That is not to say that international as well as Czech authors do not attempt a definition. Evers and Laville (2004) as well as Morris and Anderson (1975) describe social services rather broadly as such actions which have impact on an individual and the community indicating they perceive even education and culture as social services. The Czech authors who attempted to define social services strongly rely on the Czech legislature. For example Molek (2009) who discerns the social services as “activities intended to improve person’s unfavourable living situation”. In this regard the author notes that the Czech specification of social services as described in the currently valid Czech Act on Social Services is rather narrower than is usual in other European countries. Similarly, Zatloukal (2008) concludes that social services are aimed at people in situations that are beyond their momentarily ability to handle, these situations imply negative social impact on the particular individuals and social services aim to rectify that. In both the Czech Republic and other European countries the social services are strongly connected to the health care which intersects with them often and in some instances is necessary complement. Bradley et al. (Bradley, Elkins, Herrin & Elbel, 2011) indicate that there is, indeed, a relationship between social services expenditure and health outcomes on the example of OECD countries, further Shier et al. (Shier, Ginsburg, Howell, Volland & Golden, 2013) discuss the possibility of coordination of social and health care services which results in lower demands on health care system and at the same time provide greater comfort to patient/client. It is given that in many social services clients may require more intensive health care given their age, mental and physical condition and often make

even repeated transitions between the two systems (Aaltonen, Forma, Rissanen, Raitanen, & Jylhä, 2010).

There is a wide variety of people in need of social services, for some of whom these services need be also connected to health care. Langan (2000) mentions senior citizens, children, people with physical disabilities, people with learning disabilities as groups of social services client. All these target groups are also expected to use health services. Other groups particularly sensitive to combination of social and health care services are people recently addicted to various substances or homeless people. These groups and others are reflected in social services which are enumerated in the abovementioned Czech Act on Social Services which was adopted in 2006 and represented a reform based on more active user participation in social services (Hubíková, Havlíková, 2011; Krížová, 2012). The 33 social services defined by this law are essentially grouped in three larger clusters of counselling activities, preventive activities, and social care activities. All of them can be provided either in the field, as outpatient services or residential services. The role of public administration in provision of social services in the Czech Republic differs according to the particular level of the administration. The state is essentially responsible for providing regulative framework such as legislature or social policy and at the same time the state as a whole plays an important role in financing the system social services (Průša, 2009). The regional governing bodies are supposed to mostly coordinate, cooperate and analyse the accessibility of social services in their territory. According to the Czech law the municipalities are the part of public administration responsible for the very provision of social services to its citizens as per their particular needs. The role of the municipalities is widespread and often includes the position of the contracting authority to comply with the mentioned requirements of law (Kozlová, Pták, 2008), but the municipality itself may provide the services, may inform coordinate or provide counsel (Marek et al., 2013). Municipalities and regions in other countries are much in the same position. The shift of competencies and responsibilities in the area of social and even health services caused numerous troubles with financing and accessibility of the social services Europe-wide (Alaszewski, Leichsenring, 2004). The state and its administration were in fact in monopolistic position up to 1990 in the Czech Republic, only later other subjects were allowed to provide social services (Havlíková, Hubíková, 2011). This, of course, brought necessity of changes in the system of financing. It can be generally said that the recipients of social services are hardly ever in a position to pay a full market price for services offered (Cordery, 2012) and the financial literacy in the area of interest is rather low even among young people (Belás, Nguyen, Smrčka, Kolembus & Cipovová, 2016) with the added aggravation of relatively average corporate social responsibility (Briš, Svoboda, & Brišová, 2013; Burianová, Paulík, 2014). The range of financial resources for financing social services nevertheless includes user fees, private or compulsory public insurance, direct and indirect taxes (Delamonica, Mehrotra, 2009). The Czech system of financing social services prior

to legislature introduce in 2006 presented many challenges especially in terms of user activity and empowerment. The law currently in force introduced new aspect of financing social services, an allowance awarded to individual recipient of social services to select the service and provider of their choice which Daly (2002) considers a form of social service client empowerment as well as means of reducing the costs. Other methods such as subsidizing, public budget contributions remain in place.

The accessibility of social services is another issue that the Czech Republic has not yet addressed in full. The financial accessibility has been partially addressed by the changes in the system of financing social services. The aspect of spatial accessibility is, however, crucial in terms of objective of this paper. With regards to spatial accessibility Allard (2004) mentioned the social services providers often do not locate where the services might be needed the most. Průša (2006) connects the question of accessibility with Czech regions as the regional authorities are mainly the responsible bodies for planning of social services and according to the empirical findings their accessibility decreases with growing distance from the main settlement centres. This author's results of accessibility survey indicated that the main problems stem from disruption of family structures that result in increased demand for senior oriented social services, especially nursing homes. The providers are not increasing the supply accordingly. Průša (2006) also indicates long standing serious differences among the Czech regions in terms their equipment by residential social services facilities. Bareš (2008) the accessibility worsens with increasing proximity to internal and external administrative borders and with increasing distance from center of each region. Other defining characteristics include rate of urbanization, the population size of individual municipalities, and adherence to the more traditional social functions of the family. The optimization of social services network is hindered by absence of standardization which, while created as early as the 1980s, were never put into practice (Bareš, 2008; Průša, 2011). The social services sector faces multiple issues in general and one of the ways it can deal with the above mentioned problems is delivering social and other public services in smart, efficient way. Thus the social services sector may benefit from the application of the concept of smart city. The phenomenon of smart city is relatively new and rather broad and includes multiple dimensions. In case of improving social services provided and funded mostly by public means, the concept of smart governance is of special concern. Giffinger et al. (2007) describe smart governance as way to manage public affairs with focus of participation of different actors, public sector transparency, accessibility and quality of public services and strategic documents. All these aspects are readily applicable to the social services. To apply the principles of smart governance the use of modern technologies, especially the information and communication technologies is crucial (Meijer & Bolívar, 2016). However, it is not only the technology use that makes a city smart, according to Antirroiiko et al. (2014) the whole concept of smart city is further on in development when taking into account

the concern for quality of human life which includes the social and health care services.

2. Methodology

Given the aims of the article the most opportune method of obtaining the opinions of the leading persons of the municipalities of the Zlín Region was deemed to be a survey. The opinions of the leading officers of the 307 municipalities of Zlín Region were ascertained by means of a questionnaire distributed electronically in 2014 by a link leading to a Google Drive questionnaire sent via e-mail. The municipalities were addressed as follows:

- The larger municipalities (cities) were sent at least two separate e-mails addressed to two separate people such as mayors, members of city councils oriented on social services sector, or the heads of departments dealing with social affairs
- Smaller municipalities (less than 5000 inhabitants) were sent two emails, one for mayor the other addressed to a common e-mail for provision of information, or general e-mail address of the municipality office

The questionnaire was formed as to give the responding municipalities an opportunity to state their attitude in qualitative way. In total there were four sections of the survey. First section was focused on provision of the social services of the citizens of addressed municipalities, second dealt with cooperation in the field of social services, the thirds addressed the issues of trends in providing social services. The objective of the fourth part of the survey was aimed at the identification of the responding municipality. The return rate of the survey in Zlín Region was cca 70%, 216 responding municipalities, 204 of them answered enough questions to be assessed further. The questionnaire combined closed and open requests for answers with prevalence of the closed ones as regards first three parts focused on social services provision for the citizens, cooperation issues, and trends in social services expected by the municipalities' officials. The responding officials were mostly required to answer within a 5 or 6-point scale expressing their agreement or disagreement with a statement above. In cases of strong disagreements open requests for answers were available to specify further the most pressing issues the municipalities faced. The fourth part contained only two questions which were related to identification of a specific municipality.

The first part focused on the sufficiency of social services offer for selected target groups – the senior citizens, the disabled citizens, the families with children, the homeless persons, the former prisoners, the addicted persons, and the ethnical minorities. In this case 6-point Likert scales were used. The second part of the survey concentrated on systemic issues in providing social services, namely on the satisfaction with cooperation with the superior administrative units, the region and the municipality with extended scope of powers (MESPs) and on the satisfaction with the competences the municipalities have in the field of social services. In this part 5-point Likert scale was used to assess the satisfaction. The evaluation of the

questionnaire was carried out by means of descriptive statistics, principal component analysis and the cluster analysis. In order to proceed with cluster analysis some preparatory steps needed to be made and only then the analysis was carried out. Steps taken were as follows:

- Recoding data – the parts of survey intended for use in the cluster analysis were questions answered by means of the Likert scale that was converted into corresponding numerical values
- Adding information about municipalities – the municipalities identified themselves when the survey was conducted. This allowed for additional information such as number of inhabitants, city/township/village identification, status in the administrative structure to be added
- Exploring existence of correlation within the data - to address the potential problem of undesired multicollinearity which would result in overrepresentation of the correlated variables (Jurowski & Reich, 2000; Ketchen & Shook, 1996), the Spearman's rho and Kendall's tau were used to assess correlation among the ordinal data that resulted from the survey. As the data were significantly correlated the following steps was employing the principal components analysis as a mean to reduce the data set and deal with the correlations.
- Assessing suitability of the data for the principal component analysis (PCA) - Dziuban & Shirkey (1974) as well as Williams, Onsman & Brown (2010) describe this assessment which includes Bartlett's test of sphericity, calculation of the Kaiser-Meyer-Olkin measure of sampling adequacy, and analysis of the anti-image matrices. Stewart (1981) states the hypothesis of the Bartlett's test of sphericity which is "that the correlation matrix came from a population of variables that are independent". Rejection of this hypothesis is necessary to proceed with PCA. The Kaiser-Meyer-Olkin measure of sampling adequacy presents an index of total and partial correlation between the variable ranging from 0 to 1 (Hair, Black, Babin, Anderson & Tatham, 2014). As defined by Kaiser & Rice (1974) the index values below 0.50 indicate inappropriateness of the data for PCA.
- Extracting components of the factors via the principal components analysis – during the extraction the recommended orthogonal Varimax rotation was used in order to obtain uncorrelated factors that might be used in the cluster analysis (Hair et al., 2014; Williams et al., 2010).
- Cluster analysis – this type of analysis was used in order to classify the surveyed municipalities according to their perception of sufficient or insufficient provision of the social services to the previously mentioned target groups and their satisfaction with the cooperation among the administrative bodies and their own competence. The hierarchical cluster analysis was chosen because of its good fit for smaller data sets, in this case 216 responding municipalities, and its frequent use when attempting to categorize subjects into relatively homogenous groups (Janssens, Wijnen, De Pelsmacker & Van

Kenhove, 2008; Verma, 2013). The clustering algorithm chosen was Ward's method within the IBM SPSS software which included standardization of the data to z-scores. The Ward's method is a variance based one which creates clusters with smallest internal variance (Jurowski & Reich, 2000; Verma, 2013). The software was prompted to give multiple solutions ranging from 4 to 6 respective clusters in each.

- Choosing the most appropriate solution – the cluster analysis was finalized by choosing the most appropriate clustering that separated the surveyed municipalities into meaningful groups described in section dedicated to the results.

3. Results

The surveyed municipalities show high correlation among offer of the services for certain groups of social services recipients (see table 1). Namely there are members of a group that might be called ubiquitous – the senior citizens, the disabled citizens, and the families with children. This group corresponds to a certain advancement in a person's life and associated events while reflecting dispositions to illness, dependence and subsequent need of both the health care and social care systems, often working in accord. It includes some of the most frequently mentioned and most often occurring types of clients of social services and health care systems. The second highly correlated group is comprised of the homeless persons, the former prisoners, the addicted persons and the ethnic minorities. These types of social services recipients are less evenly distributed among the surveyed municipalities. The responses in survey even indicate that in some they do not seem to be present at all. The incidences of their presence, however, add further strain of the social and health care system as they are more likely to be in need of both social and in the cases of homeless and addicted persons also of the health services which are in every municipality already catering to the need of the ubiquitous group of clients but only in some there is a more pressing need for them to service also clients from these groups. Especially in the cases of homeless and addicted persons the social services cooperate very closely with the health care system and the incidences of both types of client are rather intermixed.

Table 1. Correlations of perceived social services offer among recipient groups

			Senior citizens	Disabled citizens	Families	Homeless persons	Former prisoners	Addicted persons	Ethnic minorities
Kendall's tau_b	Senior citizens	Correlation Coefficient	1,000	,636**	,415**	,192**	,213**	,193**	,175**
		Sig. (2-tailed)	.	,000	,000	,001	,000	,001	,003
		N	215	213	212	213	215	214	215

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			Senior citizens	Disabled citizens	Families	Homeless persons	Former prisoners	Addicted persons	Ethnic minorities
	Disabled citizens	Correlation Coefficient	,636**	1,000	,445**	,185**	,198**	,202**	,144*
		Sig. (2- tailed)	,000	.	,000	,001	,001	,000	,015
		N	213	213	210	212	213	212	213
	Families	Correlation Coefficient	,415**	,445**	1,000	,225**	,195**	,219**	,180**
		Sig. (2- tailed)	,000	,000	.	,000	,001	,000	,002
		N	212	210	212	210	212	211	212
	Homeless persons	Correlation Coefficient	,192**	,185**	,225**	1,000	,683**	,563**	,543**
		Sig. (2- tailed)	,001	,001	,000	.	,000	,000	,000
		N	213	212	210	213	213	212	213
	Former prisoners	Correlation Coefficient	,213**	,198**	,195**	,683**	1,000	,634**	,667**
		Sig. (2- tailed)	,000	,001	,001	,000	.	,000	,000
		N	215	213	212	213	215	214	215
	Addicted persons	Correlation Coefficient	,193**	,202**	,219**	,563**	,634**	1,000	,548**
		Sig. (2- tailed)	,001	,000	,000	,000	,000	.	,000
		N	214	212	211	212	214	214	214
	Ethnic minorities	Correlation Coefficient	,175**	,144*	,180**	,543**	,667**	,548**	1,000
		Sig. (2- tailed)	,003	,015	,002	,000	,000	,000	.
		N	215	213	212	213	215	214	215
Spearman's rho	Senior citizens	Correlation Coefficient	1,000	,693**	,472**	,228**	,249**	,224**	,203**
		Sig. (2- tailed)	.	,000	,000	,001	,000	,001	,003
		N	215	213	212	213	215	214	215
	Disabled citizens	Correlation Coefficient	,693**	1,000	,495**	,220**	,231**	,235**	,166*
		Sig. (2- tailed)	,000	.	,000	,001	,001	,001	,015
		N	213	213	210	212	213	212	213
	Families	Correlation Coefficient	,472**	,495**	1,000	,262**	,224**	,248**	,204**
		Sig. (2- tailed)	,000	,000	.	,000	,001	,000	,003
		N	212	210	212	210	212	211	212
	Homeless persons	Correlation Coefficient	,228**	,220**	,262**	1,000	,735**	,629**	,619**
		Sig. (2- tailed)	,001	,001	,000	.	,000	,000	,000
		N	213	212	210	213	213	212	213

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		Senior citizens	Disabled citizens	Families	Homeless persons	Former prisoners	Addicted persons	Ethnic minorities
Former prisoners	Correlation Coefficient	,249**	,231**	,224**	,735**	1,000	,678**	,738**
	Sig. (2-tailed)	,000	,001	,001	,000	.	,000	,000
	N	215	213	212	213	215	214	215
Addicted persons	Correlation Coefficient	,224**	,235**	,248**	,629**	,678**	1,000	,608**
	Sig. (2-tailed)	,001	,001	,000	,000	,000	.	,000
	N	214	212	211	212	214	214	214
Ethnic minorities	Correlation Coefficient	,203**	,166*	,204**	,619**	,738**	,608**	1,000
	Sig. (2-tailed)	,003	,015	,003	,000	,000	,000	.
	N	215	213	212	213	215	214	215

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

(Source: Authors)

Given the intention to create a typology of the surveyed municipalities in Zlín Region, the target groups were both too numerous and relatively highly correlated to present a suitable input into the cluster analysis. Therefore, several variables concerning the satisfaction of social service provision to the specific target groups were subjected to the PCA as a mean to dimension reduction. The Bartlett's Test of Sphericity was used to reject the null hypothesis of variables independency, the Kaiser-Meyer-Olkin measure of sampling adequacy reached value of 0.81 (see table 2) which Kaiser & Rice (1974) describe as meritorious, indicating that the data may be subjected to the PCA. The anti-image covariance and correlation matrices depicted in table 3 also indicated the suitability of selected data for PCA which proceeded according to the parameters given in the Methods section. The principal component analysis applied resulted in creation of two factors. One of them reflected mainly the sufficiency of the services provided to the ubiquitous target group (see component 2 in table 4), the other prevalently reflects the same for the spatially more concentrated group (see component 1 in table 4). Due to the Varimax rotation used the resulting coefficients are not mutually correlated and as such present suitable input into cluster analysis.

Table 2. Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test calculation for social services recipients

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,810
Bartlett's Test of Sphericity	Approx. Chi-Square	713,233
	df	21
	Sig.	,000

(Source: Authors)

Table 3. Anti-image covariance and correlation matrices for social services recipients

		Senior citizens	Disabled citizens	Families	Homeless persons	Former prisoners	Addicted persons	Ethnic minorities
Anti-image Covariance	Senior citizens	,452	-,269	-,114	-,010	-,016	,015	-,017
	Disabled citizens	-,269	,444	-,139	,004	-,018	-,025	,033
	Families	-,114	-,139	,645	-,056	,019	-,036	-,020
	Homeless persons	-,010	,004	-,056	,442	-,151	-,096	-,046
	Former prisoners	-,016	-,018	,019	-,151	,318	-,107	-,162
	Addicted persons	,015	-,025	-,036	-,096	-,107	,474	-,099
	Ethnic minorities	-,017	,033	-,020	-,046	-,162	-,099	,435
Anti-image Correlation	Senior citizens	,715 ^a	-,601	-,211	-,022	-,043	,033	-,039
	Disabled citizens	-,601	,696 ^a	-,260	,009	-,048	-,054	,076
	Families	-,211	-,260	,867 ^a	-,105	,042	-,065	-,038
	Homeless persons	-,022	,009	-,105	,865 ^a	-,402	-,211	-,105
	Former prisoners	-,043	-,048	,042	-,402	,797 ^a	-,277	-,436
	Addicted persons	,033	-,054	-,065	-,211	-,277	,889 ^a	-,219
	Ethnic minorities	-,039	,076	-,038	-,105	-,436	-,219	,845 ^a

a. Measures of Sampling Adequacy(MSA)

(Source: Authors)

Table 4. Rotated component matrix for social services recipients

	Component	
	1	2
Former prisoners	,892	,162
Ethnic minorities	,853	,090
Homeless persons	,828	,182
Addicted persons	,827	,158
Disabled citizens	,103	,888
Senior citizens	,134	,874
Families	,198	,759

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization ^a (a.Rotation converged in 3 iterations) (Source: Authors)

The same procedure was used for evaluating the data pertaining to satisfaction with the cooperation of surveyed municipalities with the upper level administrative units, the providers of social services and their satisfaction with their own competencies in the field of social services. The results of correlation calculation (see table 5) suggested relatively high correlation between the pairs of variables. The preceding Bartlett's test of sphericity as well as the Kaiser-Meyer-Olkin measure of sampling adequacy depicted in table 6 indicated a successful application of the PCA an option as do the anti-image matrices (see table 7). At this point single un-rotated component, shown in table 8, was extracted through the PCA to represent these variables in the following cluster analysis.

Table 5. Correlations of perceived satisfaction in cooperation oriented data

			With region	With MESP	With providers	With own competence
Kendall's tau_b	With region	Correlation Coefficient	1,000	,613**	,402**	,417**
		Sig. (2-tailed)	.	,000	,000	,000
		N	215	208	215	215
	With MESP	Correlation Coefficient	,613**	1,000	,506**	,431**
		Sig. (2-tailed)	,000	.	,000	,000
		N	208	208	208	208
	With providers	Correlation Coefficient	,402**	,506**	1,000	,485**
		Sig. (2-tailed)	,000	,000	.	,000
		N	215	208	215	215
	With own competence	Correlation Coefficient	,417**	,431**	,485**	1,000
		Sig. (2-tailed)	,000	,000	,000	.
		N	215	208	215	215
Spearman's rho	With region	Correlation Coefficient	1,000	,660**	,445**	,463**
		Sig. (2-tailed)	.	,000	,000	,000
		N	215	208	215	215
	With MESP	Correlation Coefficient	,660**	1,000	,547**	,477**
		Sig. (2-tailed)	,000	.	,000	,000
		N	208	208	208	208
	With providers	Correlation Coefficient	,445**	,547**	1,000	,535**
		Sig. (2-tailed)	,000	,000	.	,000
		N	215	208	215	215

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		With region	With MESP	With providers	With own competence
With own competence	Correlation Coefficient	,463**	,477**	,535**	1,000
	Sig. (2-tailed)	,000	,000	,000	.
	N	215	208	215	215

** . Correlation is significant at the 0.01 level (2-tailed).

(Source: Authors)

Table 6. Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test calculation for cooperation oriented data

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,750
Bartlett's Test of Sphericity	Approx. Chi-Square
	288,346
	df
	6
	Sig.
	,000

(Source: Authors)

Table 7. Anti-image covariance and correlation matrices for cooperation oriented data

		With region	With MESP	With providers	With own competence
Anti-image Covariance	With region	,516	-,258	-,008	-,143
	With MESP	-,258	,472	-,170	-,062
	With providers	-,008	-,170	,627	-,209
	With own competence	-,143	-,062	-,209	,623
Anti-image Correlation	With region	,722 ^a	-,523	-,013	-,251
	With MESP	-,523	,717 ^a	-,313	-,113
	With providers	-,013	-,313	,778 ^a	-,334
	With own competence	-,251	-,113	-,334	,804 ^a

a. Measures of Sampling Adequacy(MSA)

(Source: Authors)

Table 8. Component matrix for cooperation oriented data

	Component
	1
With MESP	,848
With region	,814
With own competence	,779
With providers	,765

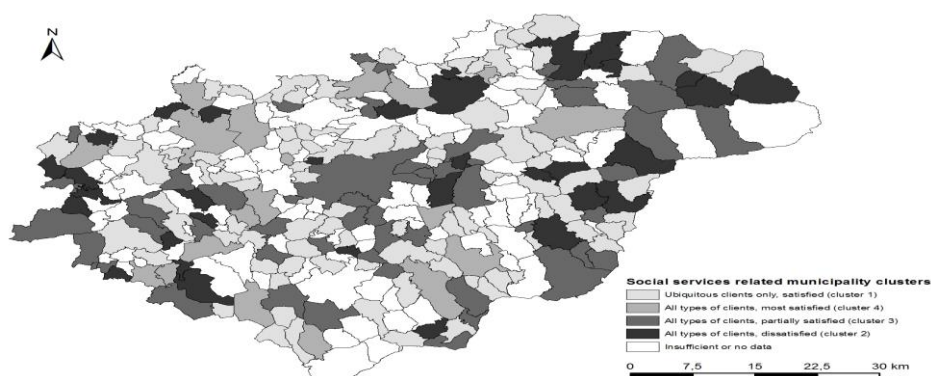
Extraction Method: Principal Component Analysis.

a. 1 components extracted.

(Source: Authors)

The resulting components relating to the offer of social services for ubiquitous target groups, concentrated target group and the satisfaction in terms of cooperation and competence were then subjected to the hierarchical cluster analysis employing Ward's Method as a clustering algorithm. The solution included three different possibilities of clustering process ranging from four to six clusters in each result. With respect to the original sample size and the meaningfulness of the created clusters, the four cluster option was chosen to classify and describe the resulting clusters of municipalities (see figure 1). The first cluster of the Zlín Region municipalities may be characterized as comprised of smaller municipalities that do not indicate presence of the concentrated groups of social services clients (the homeless and addicted persons, the former prisoners, and the ethnic minorities) and therefore do not have need of social services provided to the members of this group. The ubiquitous group is present in these municipalities, however, the municipalities reveal no serious dissatisfaction with the services offered to the ubiquitous group. Overall their stance is rather neutral indicating neither severe dissatisfaction nor enthusiastic satisfaction with the social services on offer. This type of municipality is, however, strongly satisfied with cooperation with the services providers and slightly less so with cooperation with the superior administrative bodies. They also have neutral position towards their own competencies in the area. All these findings are in accordance with the lack of pressing need to change the offer of social services that reflects in their neutral stance to the offer and no desire to challenge the present rules for the social services provision. The analysis identified 97 municipalities belonging in this category.

Figure 1. Municipality Clusters



The second cluster of municipalities may be simply described as municipalities with serious issues in the field of social services. They are the second least numerous group counting 33 individual municipalities. On average these are larger municipalities than those in the first cluster but smaller than in the

following clusters. These municipalities observe presence of all target groups the survey mentioned and in all of the cases indicate their unsatisfactory equipment with social services. They perceive lack of social services more so in relation to the ubiquitous group, especially in relation to the disabled citizens and senior citizens who are frequent occurrence in the larger municipalities and possibly less well positioned in the alternative social service network which are provided by immediate family members. The dissatisfaction these municipalities expressed with regards to the social services on offer is reflected in their attitude to the cooperation with superior bodies. In this regard, too, they are by far the least satisfied group that also feels lack of competence for solving the perceived issues. They are neutral only in their stance towards the social services providers. Given this evidence, this is the category of municipalities from where the most fervent attempts at changing current legislation and financial coverage of the social services and the related health care may emerge, creating new political actors that may try to institute such change.

The third cluster, comprised of 53 responding municipalities, presents a group of municipalities that, too, report presence of all the target groups. With regards to the ubiquitous senior citizens, disabled citizens, and families with children, these municipalities are neutral or indicate moderate satisfaction with services being offered. The concentrated group of social services clients, however, shifts from neutral to slight dissatisfaction. In the cooperation component of the survey they again copy the position of the first cluster indicating satisfaction with service providers, and neutral to moderate satisfaction with cooperation with the superior bodies and their own competence. These municipalities are to some extent combination of previous two types albeit indicating challenges mainly when dealing with the concentrate group of social services clients. As these are the second largest municipalities on average, the issues they face may well stem from the fact that while the municipalities are large enough to attract the concentrated group of social services clients, the homeless people as well as the drug addicted concentrate usually in larger settlements (Lee, Spratlen, 2004), they are not yet the top of the settlement hierarchy and thus not equipped with quantity of social services that would reflect the relatively stronger gravitational pull they have for the concentrated type of social service client. On the other hand, their relative larger size gives them more advantageous position, should any political implications of their issues be raised and addressed.

The fourth cluster of municipalities identified in the Zlín Region are on average the largest municipalities and can be shortly described as municipalities with overall positive outlook. These municipalities report strong satisfaction with social services offered to the ubiquitous group, moderate satisfaction with services offered to concentrated group. They indicate very strong satisfaction with service providers and strong satisfaction with cooperation with other administrative bodies and their own competence. This is the least numerous group of 20 municipalities. This cluster of the municipalities, while surely suffering from the most numerous

occurrences of the concentrated groups of social services clients, is also adequately equipped to handle this concentration as well as the large concentration of their own inhabitants in general, from which the ubiquitous groups client types recruit. While these municipalities may eventually be in some cases in need of more social services as their total population grows, presently the quantity and quality of the social services on offer is to their leading officials' satisfaction. This satisfaction is reflected in them being satisfied with their own competences in the field of social services. These municipalities are unlikely to initiate or call after any radical policy changes as long as the present situation remains, however, in case of doing so, merely due to their largest size and thus larger influence, they would be more likely to succeed.

4. Conclusion

This paper reacts to an intensified interest in the field of social and related health services which is prompted by population changes and tightening of available public resources, as well as often unsuitable situation of private resources of the individual in need of social and health services. The paper focuses on an area on the borders of the Czech and Slovak Republic, the Zlín Region and its municipalities. Particularly it pays attention to the municipal attitudes towards the social services provision for the citizens of said municipalities. The importance of the municipalities in this system lies in their widespread obligation to provide or secure the provision of social services for their citizens. Rather often, though, the services are provided for a wider spectrum of clients than only the citizens of a single municipality. Larger municipalities also experience influx of selected types of social services clients, such as homeless people, or more frequent occurrences of drug addicted people.

The municipal attitudes were explored in a survey which targeted all the Zlín Region municipalities and approximately 70 % of them choose to take part and describe their experience with social services on offer, cooperation with the providers of social services and other administrative bodies involved in the provision of social services, and satisfaction with their own competence in the above mentioned field. The survey results were examined and subjected to several statistical analyses as per the description in the methods section. According to their attitudes the municipalities of the Zlín Region were split into four clusters. The first cluster embodied mainly smaller municipalities in which only ubiquitous group of social service clients was present. These municipalities were satisfied with social services provision and at the same time strongly appreciated the cooperation with service providers. The officials of these municipalities expressed neutral stance to the competences with regards to the social services and are unlikely to be active in terms of attempting to changing policy pertaining to the social services. In all other groups all types of clients were present. The second group can be described as the least content one. Representatives of these municipalities were strongly dissatisfied

with services offered to ubiquitous clients of social services and moderately dissatisfied with the services for other types of clients. They had neutral stance to providers and expressed discontent also with regards to their powers. IF any political action based on satisfaction with the social services policy is likely to be taken on behalf of improving the situation, these municipalities may take an active part in order to facilitate solving of the problems they experience. The third group was more optimistic, satisfied with their powers and with the providers. Mild discontent was noted with regards to social services offer in terms of concentrated types of clients. As these municipalities were the second largest, certain attraction for the concentrated groups, or at least some of the type belonging to the group, is expected. The fourth identified group registered the greatest satisfaction expressing no discontent whatsoever. This group included the largest municipalities, arguably best equipped with the wider variety and quantity of social services to provide to their own citizens as well as the citizens of the smaller municipalities.

There are obvious limitations to this study and its conclusion considering especially moderate return rate and the fact the survey took place in a selected region. On the other hand, the limited area where the survey was undertaken may well contribute to cross regional comparison of social services field. However, the present situation of public budgets, ageing of the population and other demographic processes taking place indicate emphasis that should be laid on the social service as well as the health care and their efficient provision especially on the level closest to their clients – the municipalities. Each cluster of municipalities represents administrative units with similar issues and thus similar measures could be taken in the policy process of improving the disparities among the municipalities. Obviously, most dissatisfied municipalities are of special concern as they present serious deficiencies in terms of social services offer and the field of cooperation with the upper level of administration. They are likely discontent with the present policy and may be of help in instituting any change they perceive as positive. The revision of supply of social services is in order as well as broader inquire into their accessibility and insight into where the services are consumed and who consumes them. In order to provide quality and accessible services in the volume that reflects the needs of the various client groups, the larger settlements may well turn to the modern technologies to gather the necessary data and improve the deliverance of social services in the smart way. Mora et al. (2017) show on the example of disabled citizens that the modern application may be used for example for tracking preferred way these citizens take and in reflection of these the public spaces can be modified to suit their needs. The big data gathered from the field of social services may further serve the objective of efficiency in deliverance of social services and social benefits (Al Nuaimi, Al Neyadi, Mohamed, & Al-Jaroodi, 2015; Consoli et al., 2017). The other aspects of modern technologies which are slowly gaining entrance to both private houses and public spaces may also improve the overall accessibility of social services at opportune times for individual users (Boulos, Tsouros, & Holopainen, 2015). The municipal attitudes, which are analysed in this

paper, are worth of the policy makers' concern in order to improve quality of individuals' lives and plan social services networks accordingly to demand of the clients within the limitations of the public budgets. The municipalities may as well take on the role of political partners to the upper administration levels, support and provide insight into any changes.

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