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DOES ETHNIC DIVERSITY AFFECT SOCIAL CAPITAL IN THE RUSSIAN CONTEXT?⁴

The research considers the impact of ethnic diversity on social capital in the Russian context. The theoretical study is based on Putnam's hypothesis related to the impact of ethnic diversity on social capital. The empirical basis of a representative survey was compiled in two multicultural regions of Russia (N = 2061). To assess the level of ethnic diversity an Ethnic Diversity Index (EDI) was calculated based on the results of the latest National Population Census. Data were processed using two-level structural equation modelling. The results showed that ethnic diversity did not affect adversely the social capital of Russia, as assumed in Putnam's hypothesis. In particular, Russia's ethnic diversity positively influences ethnic tolerance and informal sociability and does not affect social trust and community organizational life. The article also suggests reasons for these results.

JEL Classification: D85, Z13

Keywords: social capital, ethnic diversity, social trust, community organizational life, informal sociability, ethnic tolerance.

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Introduction

Social capital is one of the most important non-economic facilitators of progress (Helliwell & Putnam, 1995; Knack & Keefer, 1997; Putnam, 2001, Fukuyama, 2002; Woolcock, 1998; Westlund & Adam, 2010). Like physical and human capital, social capital influences the productivity of individuals, groups, and whole societies. Putnam (1993) defined social capital as “those features of social organization, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions”.

Social capital depends on many contextual factors such as confidence in the fairness of the justice system (positive factor) (Yamagishi et. al, 1998), the possibility of getting higher education (positive factor), the protection of property rights and public safety (positive factor), religious freedom (except religious sects) (positive factor), excessive state control (negative factor) (Fukuyama, 2001), the high ethnic diversity of the society (unclear factor) (Alesina & La Ferrara, 2002). The last factor is becoming increasingly important, especially in the culturally and ethnically diverse societies.

Intensive growth of migration has occurred in the last decades in developed countries, including in Russia (Tartakovsky, 2013). First, migrants of other cultures are entering countries. Secondly, the population within a multicultural country also has wide opportunities for active internal migration. As a result, the ethnic diversity of societies increases. In this regard, we wonder: how does this ethnic diversity influence social capital as a factor of economic development? There is not a clear answer to this question in existing studies whose data are contradictory. The main discussion is around the studies of Putnam (2007; 2009). He was the first who presented the results of empirical studies of the impact of ethnic diversity on social capital using empirical data from the USA.

According to Putnam (2009, p. 3), ethnic diversity destroys social capital, in particular, by reducing social trust and volunteer activity of citizens. Some researchers in the confirmation of Putnam's theory reveal a negative relationship between social capital and ethnic diversity (Leigh, 2006; Lancee & Dronkers, 2008; Coffé & Geys, 2006). Putnam's theory is most often confirmed in empirical studies on the North American continent (McClain, 2003; Costa & Kahn 2003; Hero, 2003).

However, some empirical research shows that not in all countries, does the relationship between ethnic diversity and social capital fit into the framework of Putnam's hypothesis. Studies in Europe have shown that ethnic diversity describes a very small proportion of the variance of social capital (Gesthuizen et al., 2009). The impacts of different political factors were stronger. Hence, Putnam's main theses (Putnam, 2007) on the relationship between the level of social capital and ethnic diversity in Europe have not been confirmed. The essence of the criticism of Putnam's theory boils down to three points. Firstly, the vast majority of empirical studies are based on data collected in North America. Therefore the possibility of transferal to the general population is quite limited, especially when addressing the broader issues relating to the effect of ethnic diversity on trust. Secondly, upon closer examination, the results of existing studies are full of nuances and insolvency, although at first glance it is pretty tricky to see. In particular, researchers paid too little attention to differences in the types of interpersonal trust and their empirical measurements described in the theoretical studies. Thirdly, existing studies tend to favour the statistical significance of diversity communication and trust, rather than the essential, conceptual one. Criticism also exposed the fact that most of the work within Putnam's concept is focused on generalized trust, which is much more likely to be negatively associated with ethnic diversity than any other forms of social capital (Hooghe, 2007). To obtain reliable results on the relationship of social capital and ethnic diversity, it is necessary to use multiple indicators and forms of social capital, rather than relying only on one.

This study tests the effects of ethnic diversity on social capital in the Russian context. We choose Russia as the empirical base of the study, because it is characterized by high ethnic diversity, the history of which is unique. The ethnic diversity of Russia has two main sources. The first source is the flow of migrants from the former Soviet republics and from China. According to UN estimates for 2013, Russia is the world's second-leading country in terms of the number of immigrants (11 million), after the US with 45.8 million immigrants (International Migration Report, 2013). The second source is the historical processes, the result of which the ethnic diversity of Russia was formed and preserved. Today Russia is one of the most multicultural societies in the world having 194 ethnic groups (according to the all-Russian Population Census, 2010) and consists of 83 federal administrative units, 21 of which are "national republics".

Social capital in a multicultural context

The term "social capital" refers to certain kinds of relationships of people in groups that help people achieve goals more easily, and share different resources and information. Putnam views social capital as a resource that functions at the level of the community and society (Putnam, 2000). He defined social capital as "those features of social organization, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions" (Putnam, 1993).

As this study tested Putnam's hypothesis about the negative relationship between ethnic diversity and social capital, we consider the indicators of social capital used by Putnam in his studies (Putnam, 2007, 2009). Based on his own definition of social capital, Putnam proposed a set of indicators (Putnam, 2000; Griswold & Nichols, 2006, p. 378) which are divided into such dimensions as:

- 1) Measures of community organizational life (such as the mean number of club meetings attended in the last year);
- 2) Measures of engagement in public affairs (turnout in presidential elections; attended public meeting on town or school affairs in the last year);
- 3) Measures of community volunteerism (mean number of times worked on community project in the last year; mean number of times did volunteer work in the last year);
- 4) Measures of informal sociability (agree that "I spend a lot of time visiting friends"; mean number of times entertained at home last year);
- 5) Measures of social trust (agree that "most people can be trusted"; agree that "most people are honest").

Putnam used mainly indicators such as social trust, community organizational life, and informal sociability in his studies (Putnam, 2007; 2009). Therefore, firstly, we put forward a hypotheses regarding these three dimensions of social capital. Secondly, we used 3 social capital dimensions in our study: Measures of social trust; Measures of community organizational life; and Measures of informal sociability (Griswold & Nichols, 2006, p. 378).

The definition of social capital proposed by Putnam, also includes social norms as an important component (Putnam, 2000). As we consider social capital in a multicultural society, one of the most important norms of interaction between people will be the norms of ethnic tolerance (Harell, 2010; Son, 2007). Ethnic tolerance is also considered in a number of studies as an indicator of social capital (Onyx & Bullen, 2000; Edwards & Onyx, 2007; Onyx et. al., 2007; Campbell & Putnam, 2011). Tolerance is usually defined as "a willingness to 'put up with' those things one rejects or opposes and traditionally understood to imply restraint when confronted with a group or practice found objectionable" (Harell, 2010). Onyx & Bullen (2000) included tolerance of ethnic diversity in the structure of social capital and used for its evaluation the following statements: "Do you think that multiculturalism makes

life in your area better?"; "Do you enjoy living among people of different lifestyles?" Therefore, we consider ethnic tolerance as a forth measurement of social capital.

Social Trust and Ethnic Diversity

Evidence of an association between ethnic diversity in society and trust are quite controversial. That said, there is evidence in the literature that trust is lower in societies with a high ethnic diversity (Putnam, 2007; Gesthuizen et al., 2009).

The basis of this approach is the assumption that people dislike ethnic diversity (Alesina & La Ferrara, 2002). Ethnic diversity reduces social trust and increases the degree of uncertainty. The more ethnically diverse a society, the less people are around individuals they can identify themselves with, and the less people trust each other resulting in weakened communication and trust between people (Putnam, 2007, p.144). However, several studies have shown that the effect of ethnic diversity on trust is very small, (Andrews, 2009; Tolsma et al., 2009; Kesler & Bloemraad, 2010). The presence of cultural distance between members of society, in particular, has no adverse effect on the level of trust (Johnston & Soroka, 2001). Consequently, we cannot argue that ethnic diversity reduces trust in society.

The distinctive feature of research on the relationship between ethnic diversity and trust is that, despite the existence of various forms of trust (Levi, 1996), trust is mostly not differentiated in the literature on ethnic diversity. The researchers conclude that ethnic diversity erodes and undermines trust, but it is not always clear what kind of trust it is (Soroka, Helliwell & Johnston, 2007). However, different kinds of trust differ significantly from each other in the sense of fullness. Hence, the effects of a negative relationship between ethnic diversity and the level of trust are a different subject to the trust type (Sturgis et al., 2011). To avoid this uncertainty in our study, we are focusing on social trust only.

Therefore, we suggest two hypotheses for the possible effects of ethnic diversity on generalized trust in Russia.

H1.1 The higher the ethnic diversity of the region, the lower the social trust in people living in this region.

H1.2 The ethnic diversity of the region has no effect on the social trust between people living in this region.

Ethnic Tolerance and Ethnic Diversity

Ethnic diversity can have different impacts on ethnic tolerance. Some studies are the basis for the assumption that ethnic tolerance may be lower in regions with a high level of ethnic diversity. In particular in the framework of conflict theory (Coser, 1956; Blalock, 1967; Bobo, 1999) and competition theory (Scheepers et al., 2002; Coenders et al., 2004) it is indicated that competition for scarce resources (for instance, competition in the labour market), and competition for cultural domination grows in conditions of ethnic diversity. As a result, the perceived threat increases for members of different ethnic groups (Stephan & Stephan, 2001; Stephan et al., 2005). This growth of the perceived threat leads to increasing interethnic tensions and increasing ethnic intolerance (Lebedeva & Tatarko, 2013), which in particular is confirmed by the results of the meta-analysis of the relevant studies (Riek et al., 2006).

Nonetheless, the opposite point of view also exists in the framework of contact theory (Allport, 1954; Pettigrew & Tropp, 2006) indicating that ethnic diversity under certain conditions can lead to increased ethnic tolerance. Ethnic diversity increases the likelihood of interethnic contact. Increased frequency of intergroup contact under certain conditions has both direct and indirect impacts on the reduction of prejudice and negative stereotypes (Pettigrew & Tropp, 2008, 2011) and, consequently, promotes ethnic tolerance. Contact

theory suggests that ethnic diversity erodes the in-group/out-group distinction and enhances out-group solidarity, thus lowering ethnocentrism (Putnam, 2007, p. 144).

Therefore, there is still no clear answer to the question about the impact of ethnic diversity on ethnic tolerance, and the reason is most likely that the nature of ethnic diversity may be different. Ethnic tolerance may vary depending on the nature of diversity—whether it is *historically customary* or *formed by intensive inflow of foreign culture migrants*. In the second case intolerance would probably be higher. However, in Russia, both of these factors take place, and it is difficult to separate them. It should be noted that there is a high probability that tolerance to other migrants would be higher in a society that has historically been multicultural. The reason for this is that in a historically diverse society the population is more adapted to a degree of ethnic diversity. In this case, ethnic diversity can be positively related to the level of ethnic tolerance. “Living in an ethnically diverse environment can increase the likelihood of contact between members of different ethnic groups which translates into improved individual tolerance to diversity” (Laurence, 2009; P. 74).

These different theories and ideas allow us to suggest two different hypotheses about the possible effects of ethnic diversity on ethnic tolerance in Russia:

H2.1 The higher the ethnic diversity of the region, the lower the tolerance to ethnic diversity among people living in this region.

H2.2 The higher the ethnic diversity of the region, the higher the tolerance to ethnic diversity among people living in this region.

Community organizational life and Ethnic Diversity

Although Putnam noted that public cooperation can be decreased by ethnic diversity (Putnam, 2007), most studies show that ethnic diversity leads to increasing demand for different networks of contacts and organizations (Smith & Shen, 2002; Anderson, 2006). People living in ethnically diverse regions require social support in various community organizations as a way of adapting in the ethnically diverse regions. For instance, based on Eurobarometer's data of 2004, a positive relationship between immigration (as an indicator of ethnic diversity) and the level of informal support and the level of participation in voluntary organizations (Gesthuizen et al., 2009) were found. Researchers attribute this to people forming social ties and uniting in organizations based on their differences from other members of the society, and becoming isolated along with the “like-minded” (Smith & Shen, 2002). To be sure, there are differences in the level of social capital due to ethnicity, but the presence of a cultural distance between the members of a society has no negative impact on participation in organizations (Johnston & Soroka, 2001).

This research allow us to suggest two different hypotheses about the possible effects of ethnic diversity on participation in activities of various clubs, associations and public organizations in Russia:

H3.1 The higher the ethnic diversity of the region, the higher the involvement of people in community organizational life.

H3.2 The higher the ethnic diversity of the region, the lower the involvement of people in community organizational life.

Informal Sociability and Ethnic Diversity

Informal communication (which means communication with friends) can weaken under the influence of ethnic diversity. In ethnically diverse areas, people have fewer friends (Putnam, 2007, p. 31). The basic idea of Putnam is that the more ethnically diverse a society, the fewer

people there are with whom individuals can identify themselves and the fewer people trust each other, resulting in a weaker connection among people (Putnam, 2007, p. 144).

Yet, empirical studies carried out based on data from European countries, have observed a positive relationship between the level of informal communication, social capital, and ethnic diversity (Gesthuizen et al., 2009; Savelkoul et al., 2011). The studies suggest an indirect effect of ethnic diversity on social capital, and mediate the frequency of intergroup contact (Savelkoul et al., 2011). According to the contact hypothesis, if ethnic diversity increases the likelihood of interethnic bonds developing increases also, which prevents negative stereotypes and perceptions (Gordon, 1964; Varshney, 2003). A meta-analysis of intergroup contact theory finds that intergroup contact tends to reduce intergroup prejudice and states that “contact situations designed to meet Allport’s optimal conditions achieved a markedly higher mean effect size” (Pettigrew & Tropp, 2006; p. 766). Also, Laurence (2011), using UK data, finds strong evidence, that “diversity is associated with better interethnic relations suggesting it does not necessarily lead to social isolation between an area’s inhabitants (‘hunkering’) but can foster interethnic interaction and ‘bridging’ capital” (Laurence, 2011; p. 85). Therefore, we can suppose that ethnic diversity increases the likelihood of interethnic contacts, which in turn has a positive effect on the size of a respondent’s informal network.

This research suggests two hypotheses about the possible effects of ethnic diversity on informal sociability (number of close friends in different spheres) in Russia.

H4.1 The higher the ethnic diversity of the region, the less close friends its residents have.

H4.2 Ethnic diversity of the region does not affect the number of close friends its residents have.

High ethnic, cultural and linguistic diversity of the Russian regions make it a good domain for empirical studies of the effect of ethnic diversity on social capital.

Method

Data Collection

We carried out the survey during the summer of 2012. Russia had 8 Federal districts at that time (see Fig. 1). These districts included 83 federal administrative units, 21 of which are ‘national’ republics, named after the ethnic titles of one or more the most numerous ethnic groups living in this republic. We conducted our research in 2 of 8 Districts (see Fig. 1) and in 25 of 83 administrative units. We organized our survey in two regions of Russia with the highest level of ethnic diversity.

The total sample included 2058 respondents. We interviewed representative samples of 1,024 respondents from the Central Federal District of Russia including Moscow, and 1,034 respondents from the North Caucasian Federal District. All the respondents answered the questionnaire assessing their social capital. The sample was representative for these two regions. The median age of the respondents was 39 years old, on average 38.8 years, the standard deviation was 12.6 years.

Sample Design

Persons aged 18–60 years old residing in private households in the two federal districts in Russia. The total sample universe is 24.8 million people in the Central Federal District (CFD) and 5.8 million people in North-Caucasian Federal District (NCFD)⁵.

Fig. 1. Two Russian federal districts in which the survey was conducted

The universe covered by the sample consisted of the entire population aged 18–60 years old, residing on the territory of the two federal districts (Central and North-Caucasian) in the period of interviewing. Entirely excluded from the survey are military reservations, monasteries, hospitals, rest or convalescent homes, homes for the aged, rooms in hotels or motels, and other institutionalized population. No other exclusions were made from the universe. Type of sample was a 3-stage area sample.

Level of ethnic diversity in the regions

To measure the level of ethnic diversity in the regions, we calculated an Ethnic Diversity Index (EDI) (Riazantsev et. al., 2013). Based on the last census (all-Russian Population Census, 2010), we calculate the share of each ethnic group in each of 25 regions which is the probability that a randomly chosen person is of a certain ethnicity:

$$P_{ij} = \frac{Pop_{ij}}{\sum_{j=1}^m Pop_i}$$

where j is the region of Russia, i is the ethnic group in a region, m is the number of regions of interest, n is the number of ethnic groups registered in a region, $Pop_{i,j}$ is the population size of

⁵ Data of Goskomstat, latest National Census of 2010

the i th ethnic group in the j th region, and $\sum_{i=1}^m Pop_i$ is the population size of the i th ethnic group in Russia. Then, we square that probability to describe the probability that two persons, drawn at random, will be from that particular ethnic group (Riazantsev et. al., 2013). Next, we sum the squared probabilities for each region and get the final probability that two randomly selected people are from the same ethnic group within each region. Finally, we subtract this derived probability from 1 to get the probability that two random people belong to different ethnic groups and multiply by 100 to get an integer:

$$EDI_j = (1 - \sum_{i=1}^n P_{ij}^2) * 100$$

The EDI value may range from 0 (no diversity, ethnically homogenous region) to 100 (complete diversity, ethnically diverse region). The value '0' means that only one ethnic group is presented in a region, whereas the index point '100' can be interpreted as if two individuals, chosen at random, have zero probability to be of the same ethnicity (Riazantsev, et. al., 2013 p. 19) or every person belongs to a different ethnicity.

Measures of Social Capital

We assessed social trust using 3 statements from different international surveys: “Most people can be trusted”; “Most people always act honestly” (Putnam, 2000, p. 291), “I trust my neighbours”. We used the following responses on a 5-point scale: 1 totally disagree; 2 disagree; 3 not sure/neutral; 4 somewhat agree; 5 totally agree.

We used the following two statements to assess ethnic tolerance: “If people of different nationalities live near each other it makes life better”; “I don’t mind living among people of different nationalities” (Onyx & Bullen, 2000). We used the following responses on a 5-point scale: 1 totally disagree; 2 disagree; 3 not sure/neutral; 4 somewhat agree; 5 totally agree.

We measured the community organizational life of the respondent by asking about the number of memberships in political parties, trade unions, professional association, religious organizations, sport or interest organizations, civic associations, non-government public organizations (cf. Häuberer, 2011).

We measured the informal network of the respondent’s friends by asking about his or her number of friends in the workplace, in their neighbourhood and other friends (Häuberer, 2011; Van Der Gaag, 2005).

Data Processing

We processed the data using Multilevel Structural Equation Modelling (MLSEM), (cf., Cheung & Au, 2005; Hox, 2002 Muthen, 1985, 1994). In contrast to single-level analyses, MLSEM allows us to consider both levels of the hierarchically structured data simultaneously. In particular, it enables the partitioning of total variance into within- and between-group components and allows a separate structural model to be specified at each the individual and group level. Similar to multilevel regression models, MLSEM decomposes the variability of the indicators into individual (within) and contextual (between) variability.

Structural Equation Modelling (SEM) has become one of the techniques of choice for researchers across disciplines and increasingly for researchers in the social sciences. However the issue of how the model that best represents the data reflects underlying theory, known as model fit, is by no means agreed. There is an abundance of fit indices available to the researcher and the wide disparity in agreement on not only which indices to report but also what the cut-offs for various indices actually are.

The Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) are regarded as information theory goodness of fit measures—applicable when maximum likelihood estimation is used (Burnham & Anderson, 1998). These indices are used to

compare different models. The models that generate the lowest values are optimal. Like the chi square index, the AIC also reflects the extent to which the observed and predicted covariance matrices differ from each other.

BIC is also known as Akaike's Bayesian Information Criterion (ABIC). BIC was derived by Raftery (1995). Roughly, it is the log of a Bayes factor of the target model compared to the saturated model. For the remaining models, the Raftery (1995) interpretation is: $BIC \leq 2$, weak evidence the model should be ruled out; 2–4, positive evidence the model should be ruled out; 6–10, strong evidence the model should be ruled out; >10 , very strong evidence the model should be ruled out.

The Standardized Root Mean Square Residual (SRMR) is an absolute measure of fit and is defined as the standardized difference between the observed correlation and the predicted correlation. It is a positively biased measure and that bias is greater for studies with a small N and for low degrees of freedom. Because the SRMR is an absolute measure of fit, a value of zero indicates perfect fit. A value less than .08 is generally considered a good fit (Hu & Bentler, 1999).

The Comparative Fit Index (CFI), compares the model of interest with some alternative, such as the null or independence model. Specifically, CFI compares the fit of a target model to the fit of an independent model—a model in which the variables are assumed to be uncorrelated. As with the Normed-fit index (NFI), values for this statistic range between 0.0 and 1.0 with values closer to 1.0 indicating good fit. A cut-off criterion of $CFI \geq 0.90$ was initially advanced however, recent studies have shown that a value greater than 0.90 is needed in order to ensure that mis-specified models are not accepted (Hu and Bentler, 1999). From this, a value of $CFI \geq 0.95$ is presently recognized as indicative of good fit (Hu and Bentler, 1999).

The Tucker Lewis index (TLI), sometimes called the Non-normed fit index (NNFI), is similar to the NFI. However, the index is lower, and hence the model is regarded as less acceptable, if the model is complex. The TLI is usually lower than is the GFI (Goodness fit index) but values over 0.90 or over 0.95 are considered acceptable (e.g., Hu & Bentler, 1999).

The Root Mean Square Error of Approximation (RMSEA), also called RMR (root mean square residual) or RMS (root mean square), represents the square root of the mean of the covariance residuals—the differences between corresponding elements of the observed and predicted covariance matrix. Recommendations for RMSEA cut-off points have been reduced considerably in the last fifteen years. Up until the early nineties, an RMSEA in the range of 0.05 to 0.10 was considered an indication of fair fit and values above 0.10 indicated poor fit (MacCallum et al, 1996). It was then thought that an RMSEA of between 0.08 to 0.10 provides a mediocre fit and below 0.08 shows a good fit (MacCallum et al, 1996).

Results

Fig. 2 shows EDI values in those regions where the study was conducted. The most ethnically-diverse region is the Republic of Dagestan, which is located in the North-Caucasian Federal District. Ethnic diversity is the smallest in the Chechen Republic, which is also located in North-Caucasian Federal District.

Fig. 2. Ethnic diversity index for 25 regions of Russia in which the survey was organized

The evaluation of the impact of ethnic diversity on social capital was performed using two-level SEM. There are works in cross-cultural psychology where the procedure is fairly well described (Davidov et al., 2012).

Tables 1 and 2 present two models made using a two-level SEM. Model 1 characterizes the impact of ethnic diversity on social trust and ethnic tolerance. Model 2 characterizes the impact of ethnic diversity on informal sociability and community organizational life.

We combined the factors in two pairs to built models that had a good fit. When the dependent factor was only one of the four, it was impossible to build a multilevel model. Nor could the model be built when we used all four factors as dependent variables. When the measurement were used in the models in pairs, the fit of the models was perfect.

Table. 1. The results of a multi-level SEM demonstrating the impact of ethnic diversity on social trust and ethnic tolerance (model 1)

	Model 1 (two-level CFA including EDI)	
AIC	24,223.239	
BIC	24,386.509	
Sample size adjusted BIC	24,294.373	
SRMR within	0.028	
SRMR between	0.124	
CFI	0.990	
TLI	0.978	
RMSEA	0.04	
Factor loadings of social trust (standardized)	Within Level	Between Level
“Most people can be trusted”	0.868***	0.885***
“Most people always act honestly”	0.803***	1.0***
“I trust my neighbours”	0.513***	0.758***
Factor loadings tolerance of ethnic diversity (standardized)		
“If people of different nationalities live near each other it makes life better”	0.925***	1.147***
“I don’t mind living among people of different nationalities”	0.804***	0.835***
Correlation of trust & tolerance of ethnic diversity	0.270***	0.615***
Regression (standardized)		
EDI is a Predictor of generalized trust (betw.)	-0.09	
EDI is a Predictor of tolerance of ethnic diversity (betw.)	0.363*	

Note: AIC = the Akaike information criterion; BIC = the Bayesian information criterion; RMSEA = root mean square error of approximation; SRMR = the standardized root mean square residual. CFI = comparative fit index. TLI = Tucker Lewis index or Non-normed fit index (NNFI). Since multilevel data have a different sample size on different levels, the interpretation of the AIC is more straightforward than that of the BIC and, therefore, the recommended choice (Hox, 2002, p. 46). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1 provides a good fit, which suggests that the quality of the model is acceptable. The results demonstrate that ethnic diversity has no effect on generalized trust, but has a positive impact on ethnic tolerance instead. Social trust and ethnic tolerance are linked both at the individual level and at the regional level which means they are considered as components of a single source of social capital. On the basis of this positive relationship, the different impact of ethnic diversity on them seems to be unexpected. Ethnic diversity does not have a statistically significant impact on social trust, which contradicts Putnam’s hypothesis, but it is in agreement with a number of European papers (Gesthuizen et al., 2009). Ethnic diversity has also a positive impact on ethnic tolerance. This contradicts the theory of oppression (Putnam, 2007) and the theory of conflict (Blalock, 1967; Bobo, 1999), and supports the contact hypothesis (Allport, 1954; Pettigrew & Tropp, 2006).

Table. 2. The results of a multi-level SEM demonstrating the impact of ethnic diversity on bonding social capital

	Model 2 (two-level CFA including EDI)	
AIC	55,281.169	
BIC	55,500.738	
Sample size adjusted BIC	55,376.832	
SRMR within	0.028	
SRMR between	0.180	
CFI	0.945	
TLI	0.913	
RMSEA	0.037	
Factor loadings of community organizational life (standardized)	Within Level	Between Level
Political parties, trade unions or professional associations	0.528***	0.947***
Church, religious organizations	0.425***	0.739***
Sport or interest organization	0.518***	1.021***
Civic associations, non-government public organizations	0.667***	0.954***
Factor loadings of Informal sociability (standardized)		
friends among colleagues	0.476***	0.901***
friends living in neighborhood	0.667***	0.819***
other friends	0.553***	0.988***
Correlation of involvement in the activities of different organizations & Informal sociability	0.044	0.629**
Regression (standardized)		
EDI is the Predictor of involvement in the activities of different organizations (betw.)	-0.101	
EDI is the Predictor of Informal sociability (betw.)	0.777 ***	

Note: AIC = the Akaike information criterion; BIC = the Bayesian information criterion; RMSEA = root mean square error of approximation; SRMR = the standardized root mean square residual. CFI = comparative fit index. TLI = Tucker Lewis index or Non-normed fit index (NNFI). Since multilevel data have a different sample size on different levels, the interpretation of the AIC is more straightforward than that of the BIC and, therefore, the recommended choice (Hox, 2002, p. 46). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2 shows the results of two-level SEM demonstrating the influence of ethnic diversity on involvement in the activities of different organizations and informal sociability. The model fit is acceptable. The indicators of social capital are strongly related to each other only at the regional level. This suggests that the given indicators can be considered only at the macro-level as social capital, as in our research.

Ethnic diversity does not impact significantly the involvement of Russians in activities of different organizations in our case. This result shows neither a positive impact (Smith & Shen, 2002), nor a negative impact (Putnam, 2007). However, besides the fact that we did not find a statistical significance of the regression coefficient, the coefficient is negative (beta = -0.101). A positive and high impact of ethnic diversity on the number of respondent's friends was found. This result contradicts Putnam's hypothesis (Putnam, 2007), but was also found in some studies (Gesthuizen et al., 2009; Savelkoul et al., 2011).

Discussion

We did not confirm Putnam's hypothesis (Putnam, 2007; 2009) about the negative relation between trust and ethnic diversity using data from Russia. This notwithstanding, our results are in accord with the existing data. Ethnic diversity can negatively affect social trust at the individual level, but at the country level an extremely weak and tenuous correlation between diversity of society and social trust has been found (Hooghe et al., 2009). Thus, we confirmed the hypothesis 1.2 about the absence of effect of ethnic diversity of region on social trust of the people living in this region.

It was shown that ethnic diversity has a positive impact on ethnic tolerance (confirming hypothesis 2.2). Thus, the higher the ethnic diversity of the region, the higher the tolerance to ethnic diversity among people living in this region.

Why is this phenomenon observed in multicultural regions of Russia? We believe that there are two explanations. The first is that a higher tolerance is a way of adapting to ethnic diversity. High ethnic diversity in many regions is the reality in which people have had to live for a long time. They had to adapt to the cultural specificities of each other, and such adaptation is impossible without mutual acceptance, i.e. tolerance. The second explanation is that living together inevitably leads to interethnic contacts, and interethnic contact, under certain conditions, relate to the improvement of interethnic relations and an increase of ethnic tolerance.

The contact hypothesis has found confirmation in many studies. Kalin and Berry (1982) found substantial support for contact hypothesis, when status is controlled. Pettigrew and Tropp (2006) carried out meta-analyses of numerous studies of the contact hypothesis coming from many countries and many diverse settings and their findings provide general support for the contact hypothesis.

In assessing the impact of ethnic diversity on community organizational life and informal sociability we obtained quite unexpected results. Ethnic diversity has no significant effect on respondents' involvement and activities in clubs and associations (hypotheses 3.1 and 3.2 are not confirmed). Yet, ethnic diversity has a positive effect on an informal sociability (number of friends), which was not expected (hypotheses 4.1 and 4.2 are not accepted).

Ethnic diversity does not increase formal aspects of social capital (community organizational life), but it rather strengthens informal relation and relationships (informal sociability). In the ethnically heterogeneous regions of Russia, members of organizations and communities do not provide the main social support, but friends and acquaintances do. The formation of a large number of informal relations in ethnically heterogeneous regions of Russia is impossible without ethnic tolerance. This is another explanation for why ethnic diversity is positively related to ethnic tolerance in multicultural regions of Russia.

Why ethnic diversity has no effect on some components of social capital and affects others? Why did not we detect negative impact of ethnic diversity on social capital, when it is predicted by many studies? We can suggest that the impact of ethnic diversity on social capital depends on following specific factors.

- 1) A long the period of cohabitation. A long history of living together forms experience of coexistence and tolerance towards ethnic diversity naturally. It is one of the mechanisms of mutual adaptation and mutual acceptance. That is why in Russia a negative impact of ethnic diversity on generalized trust was not found, but a positive impact was.

- 2) The cultural characteristics of people living in multicultural regions. Russia's ethnic diversity is represented mainly by representatives of collectivistic and more or less traditional ethnic groups (for example by representatives of people from the North Caucasus). Representatives of such ethnic groups tend to have a lot of friends (see Häuberer, Tatarko, 2014).

3) The sources of ethnic diversity. Almost all research devoted to the study of the impact of ethnic diversity on social capital was conducted in countries in which ethnic diversity is the result of external migration (the USA, European countries, Australia). Russia's ethnic diversity has other sources—it has developed historically throughout centuries. Moreover, even external migrants come from countries of the former USSR so Russian culture is not completely alien for them. In addition, they are not perceived as absolute “strangers” by the host population. Therefore the point of view Hooghe (2007) is most likely correct and ethnic diversity in itself cannot reduce social capital but the influx of a large number of migrants having different mentality can.

Conclusion and Implications

The ethnic diversity of the Russia's regions is either a neutral or positive factor relating to the social capital of these regions. This social capital does not suffer from ethnic diversity, although the negative effects of ethnic diversity on social capital are predicted in previous studies. We found that ethnic diversity does not have a statistically significant effect on social trust and has a positive effect on ethnic tolerance. Also we found a negative, but weak and statistically insignificant effect of ethnic diversity on community organizational life and a strong positive effect of ethnic diversity on informal sociability.

Putnam's hypothesis explains the relationship between ethnic diversity and social capital in conditions where historical and cultural ties between people are weak. Ethnic diversity does not reduce social capital in a situation when ethnic groups living on the same territory, have the same opportunities, a common history, cultural exchange, and the boundaries between these cultures are not an obstacle for interethnic relationships.

Why it is important to know how ethnic diversity influences social capital in multicultural society?

First, it is important to understand the prospects for the development of societies with high levels of ethnic diversity, because social capital is an important non-economic factor in the development of a society.

Second, the study of the interrelation of social capital and ethnic diversity in different countries and contexts shows how the nature of this interrelation can be universal. It will allow researchers to conclude how the results received in some countries, may have prognostic value to other countries.

Third, the results of this study are very important for the socio-political discourse, because they allow the members of multicultural societies to answer questions about how ethnic diversity influences society's social climate.

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