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# NETWORK COMPOSITION, INDIVIDUAL SOCIAL CAPITAL AND CULTURE: COMPARING TRADITIONAL AND POST-MODERNIZED ETHNIC GROUPS

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**WORKING PAPERS** 

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NETWORK COMPOSITION, INDIVIDUAL SOCIAL CAPITAL AND

**CULTURE: COMPARING TRADITIONAL AND POST-**

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This article deals with the influence of cultural background on the sources of social capital. We analyse

four different culture groups - Czechs and Russians representing post-modernized cultures and

Dagestanis and Chechens representing traditional cultures. Applying univariate comparisons and

Structural Equation Modelling, our results indicate a clear difference between post-modern and

traditional cultures. Postmodernity seems to come along with less family network density and greater

formal network size; however, also with higher family social capital access than traditionalism. No clear

distinction can be drawn regarding size of friendship network and social capital accessed by the

friendship network.

Key words: individual social capital, social networks, culture, modernization, tradition, resource

generator

JEL Classification: D85.

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#### Introduction

Cultural modernization leads to great changes in the relationships among the members of a society. Thereby, cultural values undergo the most drastic changes. Step by step, traditional values are substituted by secular-rational values and survival values are replaced by self-expression values (Inglehart, Baker, 2000). Social capital is a phenomenon that depends not only on policy, but also on culture (Allik, Realo, 2004; Inglehart, Baker, 2000). Social capital is based on a societies values and it shapes these values (Bankston, 2004). Since values and culture itself change during the modernization process, we expect social capital of the members of such culture to change as well. However, the social capital appearance of representatives of traditional and modern cultures is not well studied so far. Thus, this paper aims to answer the question if cultural background explains individual social capital (=social resource) access. How does the social capital of representatives of traditional cultures differ from the members of modern cultures? Our research is dedicated to finding answers to these questions. Is difficult to investigate the change of social capital during the process of cultural modernization, because it takes a lot of time and appropriate data is difficult to find. However, we can compare the characteristics of the social capital between individuals of traditional and post-modernized cultures. This will allow us to analyze the differences and understand the main trends in social capital of traditional and modernized cultures.

In detail, we base our research on the cultural map of Inglehart and Welzel (2010). We analyze the differences between two sets of respondents: from societies holding predominantly secular-rational and self-expression values (later post-modern cultures) and from societies holding predominantly traditional and survival values (later traditional cultures). Chechens and Dagestanis represent cultures from the North Caucasus with predominantly traditional/survival values and Czechs and Russians from Moscow represent cultures with rational-secular and self-expression values. We compare family, friendship and formal networks of the respective groups and assess how these networks influence social resource access.

For this purpose we analyze data of two different surveys: the survey "Social Relationships among Czech Citizens" conducted in 2007/8<sup>3</sup> and the survey "Values and Economical Behavior: Testing explanatory models in experiments and field studies" conducted in the Russian Federation in 2012<sup>4</sup>. Both surveys applied the same Resource Generator items allowing comparisons of social capital distribution and their sources in different cultural settings.

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The paper is structured as follows. The first part introduces the social capital concept and formulates hypotheses regarding the connection between network embeddedness and social capital access. Furthermore, we discuss possible influences of culture on network formation and social capital access. The second part focuses on the researched groups and categorizes them into the cultural map of Inglehart and Welzel (2010) because both of them are not part of the World Values Study and cannot be classified using it. The third part introduces the data and the results are shown in part four. Finally, the paper concludes in a discussion of the results.

Our study indicates that cultural background matters for social capital access, because it affects social network formation. Regarding networks, we find a clear difference along the continuum of traditional/rational-secular values and survival/self-expression values. Russians and Czechs have less contact with their family members but bigger formal networks than Chechens and Dagestanis. The same pattern occurs regarding social capital accessed by family, but in the opposite direction than expected. Although the representatives of post-modernized culture have less contact with their families, they access more social capital in their families than representatives of traditional culture. No clear pattern occurs regarding the friendship network. While Czechs and Russians have similar friendship network sizes as Dagestanis, Chechens have much smaller informal networks than Dagestanis. Regarding social capital access from a friendship network, only Russians access more than the three other groups. Finally, the family network does not determine social capital access, but the friendship network does.

#### **Social Capital**

Social capital has evolved into a key concept in current social sciences as it shows value in explaining success of individuals in their professional life (e.g. Behtoui, 2007; Burt, 1992, 2000; Granovetter, 1973; Lin, 1999, 2001), but also the well functioning of a society (e.g. Engström et al., 2008; Kawachi et al., 1997, 1999; Paxton, 2002; Putnam, 2000). Although the conceptualizations of social capital are manifold (cf. Coleman, 1988, 1990; Burt, 1992; Putnam, 2000; Lin, 2001; for an overview see Häuberer, 2011), most concepts share Bourdieus' (1986: 248) idea that social capital consists of "actual or potential resources linked to a membership in a group". We take this position and refer to social resources as social capital only, because social resources initially represent what is meant by capital. Resources can be used to attain goals and individuals can easily invest in their volume by creating their networks. Individuals access concrete social resources – like help with the yearly tax declaration or having the shopping done if sick – in their networks depending on their prior investment in it. Spending time with network members and assisting them when they need help forms a basis for exchanging social resources. Help represents a donation of resources, and thus, starting or maintaining resource transfer. Such action builds social capital (Plickert et al., 2007: 406). Empirical results evidence this connection.

Analyzing Eurobarometer data, Häuberer (2014) indicated that social resource access strongly depends on embeddedness in informal and formal networks. Individuals living in big households, having regular contact with their friends, colleagues and neighbours and who participate in associations (with the exception of associations pursuing political goals) had better access to social resources. Recently, Mollenhorst et al. (2014) showed that social resource access depends on the opportunity to maintain or create relationships. Persons an individual is in regular contact with are the ones perceived as sources of social resources.

The literature review shows that network embeddedness depicts a crucial precondition for social capital access (Häuberer, 2011: 150). Individuals are embedded in informal networks composed of family members or friends and formal networks formed in associations (Putnam, 2000). We expect the composition of the networks to mediate social capital access and we formulate hypotheses H1a: *The embeddedness in the family-network positively influences the amount of social capital accessed by family members*, H1b: *Embeddedness in a friendship network positively influences the amount of social capital accessed by friends*, and H1c: *As embeddedness in formal networks helps to form a friendship network, we expect it to positively influence the amount of social capital access by friends*.

The composition of individuals' networks is well researched. So far, we know that the size and characteristics of individuals' networks vary according to individual socio-demographic characteristics. Men tend to have larger networks than women. Individuals with high education access larger networks than individuals with low education (Behtoui, 2007; Lin et al., 2001). Age plays a crucial role in social network composition as well. With increasing age social contacts accumulate. That is, access to different occupations increases during life, however, decreases in high ages (McDonald, Mair, 2010). Old people tend to have strong ties mostly with family. Networks of young people are mostly composed of friendship ties (van Tilburg, 1998). This also means that social capital access varies according to sex, age and education. The findings are consistent regardless of whether social capital is measured by potential social capital access – indicated by access to individuals with occupations of high prestige (Position Generator, cf. Lin et al., 2001) –, or access to concrete resources: women, younger respondents and higher educated individuals tend to have greater access to social resources than men, older and less well educated respondents (Häuberer, 2014).

Another important precondition for network formation, and therefore social capital access, is the cultural background and values individuals hold. Because it is a point not well researched yet, this paper aims at closing this gap.

Culture forms the characteristics of a social environment in which an individual will act and therefore influences the way individuals act (Berry et al., 1997: 66). The characteristics of the industrial structure of a country – the scale of businesses, their distribution in the economic system, and organizational methods of individual firms – are due to its culture (Fukuyama, 1995). According to Lewin's (1935) field theory – perceiving the personality of an individual as a function of life space and interactions –, Berry et al. (1997: 66) suppose that the behaviour of an individual is a function of personal traits like attitudes, personal characteristics and the social environment. This means that individuals' behaviour is a function of the interaction of their personality characteristics and features of the environment, which, in fact, the culture relates to. Therefore, we expect culture to affect how individuals create their social networks and how they invest in networks, which - as a result - influences individual social capital access. Ideas about the cultural causation of social capital have been expressed time after time (cf. Putnam, 1994; Fukuyama, 1995; Allik, Realo, 2004). Munene et al. (2005) expect value orientations as part of the culture (e.g. basic life principles) to be associated with social capital. Value orientations differ in various ethnic groups. The importance of value orientations in social capital research is displayed as the authors use value coherence within a group or society as one indicator of social capital. Also Bankston (2004: 177) highlights in reference to Coleman that social capital may not be just a representation of a relationship structure between individuals, but quite the opposite, it must be seen in connection to values, beliefs and expectations, which are maintained and transferred within a group.

In cultural comparative research, two main dimensions of cultural variation are evident: variation on a traditional to secular-rational spectrum of values, and a variation from survival to self-expression values (Inglehart, 2006). Traditional values are represented by high importance of religious believes, intensive family ties, patriotism and nationalism. Secular-rational values are indicated by absence of religious faith, acceptance of pluralized life forms, and the rejection of authority. The former exist in predominantly agrarian societies while the latter exist in industrialized societies (Inglehart, 2006: 120; Inglehart, Welzel, 2010: 553). In contrast to traditional societies, modernized or industrialized societies feature a high degree of urbanization along with single households and predominance of nuclear families. Individuals of traditional societies tend to stay their whole life in the group they were born into, because it equals their economic group (de Vries, 1961: 64, 219). Traditional cultures foster crafting of traditional items and eating traditional types of food and exercise their native language and cultural forms (de Vries, 1961: 61). Accordingly, professional occupations differ as well. While

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<sup>&</sup>lt;sup>5</sup> Although using value coherence as indicator of social capital is not entirely in accordance to our social capital definition, referring to social resources only, the results of this study point out the importance of values in shaping social relationships.

traditional cultures are engaged in activities that do not need technical equipment, people in modern cultures engage in activities that do (Inkeles, Smith, 1974).

Survival values are connected to physical and economic security. They come along with materialist attitudes and intolerance to minorities. In contrast, self-expression values emphasize, for example, freedom and quality of life, post-materialist attitudes, and tolerance towards people that are different (Inglehart, 2006: 120, Inglehart, Welzel, 2010: 553). The scale of survival and self-expression values is comparable to Hofstede's (1980) collectivism and individualism scale and Schwartz' (1994) embeddedness and autonomy scale (Inglehart, 2006: 125f), and with Parsons Pattern Variables on collectivity orientation and self-orientation (Parsons, 1970: 67). According to Inglehart and Welzel (2005, 2010) self-expression values emerge in post-industrialized societies characterized by the predominance of a service sector. Post-modern countries usually have high levels of welfare and good living conditions. Leisure activities are mainly exercised with friends. Survival orientations are predominant in non-industrialized and industrializing countries.

Besides the economic development, different values seem to be influenced also by religious background. Inglehart and colleagues show quite stable and close clustering of countries with similar cultural-religious background regarding their traditional/secular-rational values and survival/self-expression values. Citizens of historically Protestant countries (e.g. Germany, Sweden, and Netherlands) hold secular-rational values accompanied by self-expression values. People of Orthodox countries like Russia, Ukraine or Romania are likely to hold secular-rational values paired with higher survival values compared to Protestant countries. The values of citizens in Catholic European countries like Czech Republic, France, or Italy range in between Orthodox and Protestant. Furthermore, countries with Islamic heritage like Turkey, Iran or Pakistan cluster at traditional value orientations paired with survival values (Inglehart, Welzel, 2010: 554<sup>6</sup>).

Research on the effect of values on social capital formation is rare. Matters are even more complicated as studies mainly use different social capital definitions. Allik and Realo (2004) showed that a relationship exists between collective social capital (indicated by trust and associational involvement) and the psychological dimension of culture, such as individualist vs. collectivist values. The study found high correlations of trust, associational memberships and individualism for 43 countries. The tendency of individualistic cultures to have greater trust and formal networks than collectivist cultures even remained after controlling for GDP (cf. Allik, Realo, 2004: 41). For our network perspective on social capital, this study gives some valuable insights into the size of formal networks as they seem bigger in individualized societies. This even holds after splitting collectivism indicators into indicators of familism and institutional collectivism practices. High familism even

 $<sup>^6 \</sup> See \ updated \ map \ at \ http://www.worldvaluessurvey.org/wvs/articles/folder\_published/article\_base\_54.$ 

decreases associational participation; institutional collectivism practices seem unrelated to formal networks (Realo et al., 2008: 457).

Concerning individual social capital, we know about one study only that analyzes cultural aspects of social capital. This study reveals contrary results to the above discussed. It was demonstrated that individual social capital is positively associated with collectivist orientation and negatively correlated with individualistic orientation (Beilmann, Realo, 2012). As the author's social capital index is composed of trust, honesty and interest in politics, it leaves no answer about the relationship of individualism and network composition, and thus, resource access of individuals. This is where our paper comes in. We argue that characteristics of the discussed societal types allow us to draw conclusions about social capital access. We expect values to play a crucial role and distinguish a) traditional values and secular-rational values and b) the self-expression values in contrast to survival values. The results of our literature review are displayed in Figure 1. The value combination of predominantly traditional and survival values is common in traditional societies, while the combination of secular-rational and self-expression values is common in post-modernized societies (Inglehart, Welzel, 2005, 2010). Traditional values come along with importance of multigenerational family structures and survival values include collectivism and strong family orientation. Accordingly, we expect social capital to emerge especially in families in traditional societies. Thus, we formulate Hypothesis 2a: Individuals of traditional societies have bigger and denser family networks than individuals in post-modernized societies. Because post-modern societies are likely to combine secularrational values and self-expression values, we find pluralized life forms and individualism in them. Relationships are formed outside the family. Thus we expect Hypothesis 2b: Individuals of postmodernized societies have bigger friendship networks than individuals of traditional societies, and Hypothesis 2c: Individuals of post-modernized societies have larger formal networks than individuals of traditional societies.

Furthermore, the different composition of network shall also influence social resource access in these networks. Thus, we additionally formulate Hypotheses 3a: *Traditional cultures receive most social capital from their family ties compared to post-modernized cultures*; and H3b: *Individuals of post-modernized societies receive most social capital from their friendship relations (formed in friendship circles as well as formal networks) compared to traditional societies.* 

Figure 1: Cultural Values and Social Network Composition

Secular-rational values	Modernized Society	į	Post-modernized Society
(e.g. no relgious believe, pluralized life forms, rejection of authority)	Social Networks (in transition characteristics of networks o traditional and post-moderniz societies	f	Social Networks: core family, Intensive relations outside family, leisure activity with friends, big formal networks
vs.			
Traditional values (e.g. religious believe, importance of family (=economic basis), patriotism, nationalism, crafting, traditional food)	Traditional Society  Social Networks: big family networks, intensive relations among family/friends, small formal networks		
craring, traditional room,		vs.	Self-expression values
	(e.g. collectivism materialism, Physical/economic security)		(e.g. freedom, quality of life, postmaterialism, leisure with friend)

Notes: Figure based on cultural map of Inglehart, Welzel (2010).

#### Studied Ethnic Groups: Cultural Differences of Czechs, Russians, Chechens, and Dagestanis

To analyze the relation between social capital access and cultural background, we compare four cultural groups — Czechs, Russians, Chechens, and Dagestanis — whose representatives have similar and different features. First, all four countries are post-communist states (cf. Inglehart, Baker, 2000). The Russians, Chechens and Dagestanis live in the Russian Federation and the Czechs in the Czech Republic — once part of the former socialist Czechoslovakia. Accordingly, ideology and social system were similar for the members of these cultures. We know that under communism especially informal networks were formed alternatively to the state and forced participation in formal networks (Raiser et al., 2001).

As Dagestan and Chechnya did not take part in the World Values Survey, we cannot simply classify them according to the cultural map of Inglehart and Welzel (2010). Furthermore, we analyzed a sample of Russians living in Moscow. As Moscow is one of the most developed regions in Russia, we expect the values of the Russians in our sample to differ from the rest of Russia. Thus, we more accurately analyze the cultural similarities and differences between members of these ethnic groups in

the following. We use criteria derived in part 1.1 accompanied by criteria derived from relevant literature on the subject (cf. de Vries, 1961; Chance, 1965, Dressler, 1982, 1994; Inkeles, Smith, 1974):

Religion. Most Russians and Czechs profess Christianity (with the distinction of orthodox and catholic confessions). In contrast, Dagestan and Chechnya are predominantly Islamic cultures. In Chechnya and Dagestan, about 43% of the population regularly attends a mosque (Caucasus online, 2012). Whereas in Moscow only about 14% of the population goes to church on a regular basis (at least 1 time per month) (Izvestiya, 2010). Furthermore, Czech Republic is the most secular country in Europe - in 2011 79% of the population indicated to be no believer (Czech Statistical Office, 2013b). Comparing the religious involvement to the cultural map of Inglehart and Welzel (2010) means that Czechs should hold the most secular-rational and self-expression values, followed by Russia. Chechens and Dagestanis hold more traditional and survival values.

Place of residence (community urbanization level). Urban residents can be considered as representatives of a more modernized group than rural residents (Inkeles, Smith, 1974: 292), usually associated with secular-rational values (cf. Inglehart and Welzel, 2010). The peoples of the North Caucasus (in our case — the Chechens and Dagestanis) live in less urbanized environments than do Russians and Czechs. In 2012, 73% of Czechs lived in urbanized areas (cf. World Bank, 2013a). Russian respondents in our sample come from Moscow Region, so they also all live in an urbanized area. Only 35% of Chechens and 45% of Dagestanis lived in urbanized areas (Russian Federal State Statistics Service, 2010) indicating their traditional character. This speaks again for traditional values of Chechens and Dagestanis and secular-rational values of Russians and Czechs.

Type of food. The traditional type of food according to the natural and ecological environment is typical for less modernized cultures (de Vries, 1961: 64). Dominating use of store-bought foodstuffs is indicative of a large modernized culture. Regardless of other food sources the peoples of the North Caucasus use the traditional type of food. Moreover, when moving to the central parts of Russia, they typically retain their food preferences towards industrially processed food.

The level of well-being. Generally, post-modernization is characterized by increasing economic well-being, which also results in higher levels of individual well-being (Inglehart, Welzel, 2010). Such cultures are likely to hold self-expression values. In our sample, the Russians living in the European part of Russia and the Czechs have a higher standard of living than most of the residents of the North Caucasian Republics of Russia. For instance, in 2012 Dagestan revealed a Gross Domestic Product per capita (GDP) of \$7,509 USD. Chechnya revealed less than Dagestan – \$4,495 USD. In Moscow the GDP reached \$58,085 USD (Russian Federal State Statistics Service 2013) and Czech Republic revealed a GDP of \$18,608 USD (World Bank, 2013b). Accordingly, Dagestanis and Chechens are likely to hold survival values, while Czechs and Russians hold self-expression values.

*Education level.* With (post-)modernization of culture, the level of education of its representatives also increases (Inkeles, Smith, 1974: 297). In the European part of Russia and the Czech Republic, the education level is higher than that of the residents of the North Caucasus. In 2012, the share of the population with a higher education in Moscow was 41%, but only 18% in the Republic of Dagestan, and in the Chechen Republic this index was less than 15% (RIA-News, 2012). In the Czech Republic, 37% of individuals held at least an A-level degree in 2011 (Czech Statistical Office, 2013a).

Relational orientation. Representatives of traditional cultures are oriented mainly on intra-family relations, whereas the representatives of post-modernized cultures are focused on extra-family social contacts (Inglehart, Welzel, 2010: 563), which is true for Czechs and Russians. Furthermore, representatives of the peoples of the Russian North Caucasus have a greater importance of values in Schwartz's methodology (Schwartz, 2006) describing the other people's orientation (Universalism, Benevolence), i.e. self-transcendence (Lebedeva, Grigoryan, 2013). The Muslim peoples of the North Caucasus especially favour values such as conformity, tradition, and universalism. All these values mean more individual focus on other people rather than on themselves (Lebedeva, Grigoryan, 2012) indicating collectivist and thus, survival values.

Consequently, our analysis allows us to divide the four researched groups into two cultures: a traditional culture from North Caucasus with predominantly traditional and survival values and a post-modernized Slavic culture with predominantly secular-rational and self-expression values. Regarding our classification of values and social network composition in Figure 1, we would find Chechens and Dagestanis in the lower left and Czechs and Russians in the upper right.

At the same time, these are four independent ethnic groups with different languages and, therefore, if comparing them individually in terms of individual social capital, we will be able to isolate the elements which:

- a) have *ethnic* differences (e.g. between the Russians and all other groups or the Chechens and all other groups etc);
- b) have *cross-cultural* differences (between the Russians and Czechs on the one hand, and the Chechens, Dagestanis on the other).

#### **Data and Measures**

#### Data

To test our hypotheses, we analyze data of two surveys administered in Czech Republic and in the Russian Federation. The Czech survey "Social Relationships among Czech Citizens" was designed as a test-retest study. The respondents were interviewed at two points in time (2007 and 2008) wherein the second round 129 of the 400 respondents of the first wave participated. Here, we refer to data of the

second wave as it included most items also applied in the Russian study. The survey was carried out by the social research institute SC&C Ltd.. It included respondents over 18, randomly collected and refined by quotas to represent Czech society (Häuberer, 2011). The Russian survey "Values and Economical Behavior: Testing explanatory models in experiments and field studies" was administered between June 2012 and August 2012. This study was conducted by the Institute for Comparative Social Research Ltd. (CESSI) by request of the International Laboratory for Socio-Cultural Research at HSE. A representative sample of Russian adults from two large states (okrugs) was drawn and people aged 18 to 60 years of age (inclusive) residing in private households were selected. We employed a multistage (3stage) area sample. The effective total sample size was 2,058 interviews: 1,024 personal interviews in the Central Federal State including the city of Moscow and 1,034 personal interviews in North-Caucasian Federal state. The survey was conducted in these regions, because a big difference in the level of socio-cultural modernization exists between them. The North-Caucasian Federal State is characterized by the preservation of the traditional way of living and traditional values of their people. The culture is more modernized in the Central Federal district, particularly in Moscow and in the Moscow region. The population of Moscow and Moscow region attain higher levels of education, since all major universities are located in Moscow. The level of education, as we have seen above, is a characteristic that distinguishes the traditional culture and postmodern cultures. Conducting the survey in these districts guaranteed that our samples were different according to the level of cultural modernization.

For the analyses presented here, we selected a subsample of Russians from Moscow, Dagestanis and Chechens (N=718, see also Table 1) from this Russian sample. Thereby, we generated similar sample sizes of the different ethnic groups like in the Czech sample. Finally, we merged the data with the Czech sample.

#### Dependent variables

Social capital. We measured social capital by social resources received from informal networks (family and friends) by the person. Such resources range from receiving help in house repair to legal and financial assistance (Häuberer, 2011; van der Gaag, Snijders, 2005; Verhaeghe, Tampubolon, 2012). We modified the wording where it was necessary to fit the Russian context, as Häuberer (2011) did in the Czech context as well. This method asks how many family members and how many friends/acquaintances the respondent has who "can advise them on legal or bureaucratic issues", "are able to help the respondent to find a job", "can employ people", "work at the municipal or other types of state authorities", "are well up in financial questions" (tax, subsidies, social support, pension insurance); and who "earn a great amount of money" (see Appendix A.1).

#### Independent variables

Size of informal networks. We measured the informal network of a family by asking respondents about the contact frequency with parents<sup>7</sup>, brothers and sisters, children, uncles, aunts, and cousins (Häuberer, 2011; van der Gaag, Snijders, 2005; Verhaeghe, Tampubolon, 2012). The contact frequency to family members was measured on a four point scale where high values indicate contact three or more times a month and the lowest value indicates the absence of a living relative of this kind (see Appendix A.1).

We measured the informal network of friends by asking for the respondents' number of friends in the workplace, in the neighbourhood and elsewhere (cf. Häuberer 2011).

Size of the formal networks. We measured the formal network with organizational involvement by asking the respondents about their participation frequency in four different types of associations like a political party, church, sport organization, or civic organization (see Appendix A.1; cf. Häuberer, 2011; Yang, 2007; Beilmann, Realo, 2012). We dichotomized the variables because of two reasons: first, the participation frequency was measured in the Czech survey at a three point scale, but the Russian survey used a five-point scale. Second, the participation rates are extremely low in both countries. Whereas differentiating contact frequencies does not add any explaining value.

*Cultural background.* This was measured by ethnicity of the respondent, indicated by dummy variables (Czech, Russian, Dagestan and Chechen origin).

#### Control variables

We included sex, age and education as control variables. Education was measured on different scales in both surveys, thus we constructed a dichotomous education variable where 0 indicates elementary and skilled education and 1 indicates A-level education and university degree (see Appendix A.1). The reader will find the demographics in Table 1. In all samples except the Czech one, more women participated than men. The respondents were on average between 26 and 43 years old. Concerning education, almost 50% of Russians and Czechs had at minimum an A-level degree, while only 27% of the Dagestanis and 21% of the Chechens had it.

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<sup>&</sup>lt;sup>7</sup> Contact frequency to parents was measured separately for mother and father in the Czech survey. As the Czech respondents had more contact with mother than father, we used the contact frequency to mother as indicator for contact frequency to parents.

**Table 1: Demographics** 

	Russian	Czech	Dagestanis	Chechen
N	291	129	261	166
Gender (%)				
Male	46	53.5	38.3	42.8
Female	54	46.5	61.7	57.2
Age				
Mean	38.50	42.61	36.43	37.67
Median	38.00	43.00	35.00	37.00
Standard Deviation	11.796	16.307	12.095	11.970
Range	42	63	42	41
Education (%)				
Low (elementary, skilled)	51.9	51.2	73.2	78.9
High (A-level, University)	48.2	48.9	26.8	21.1

#### Analysis Strategy

For all analyses, we merged the data into a single data set. To get an idea of differences in social networks and social capital among the researched groups, we compare the median values of the network and social capital measures by nonparametric Kolmogorov-Smirnov tests (Field, 2001: 46-49) using SPSS 19. For evaluating significant differences between percent shares we have used  $\varphi$  criteria – Fischer's angular transformation (Gubler, Genkin, 1973). This criterion evaluates the significance of differences between the percentages of two samples in which the effect of interest is registered.

As these univariate analyses are not able to control for background variables, we additionally calculated structural equation models using Amos 20 to assess the connection between networks, cultural background and social capital. This method allows us to test all hypotheses at once and to better control for errors than other multivariate approaches because it deconstructs valid variance as well as systematic and random error variances (Urban, Mayerl, 2014: 17).

#### **Results**

#### Descriptive Comparisons

Social Networks. At first we compare the four groups – Czechs, Russians, Dagestanis, and Chechens according to their network embeddedness. Figure 2 displays the contact frequencies to their family members of the respondents of the four groups and Table 2 shows the results of the Kolmogorov-

Smirnov tests difference analyses. Our results demonstrate that quite few differences occur; however, the following trend can be deduced: The smallest number of differences can be observed between the responses of Chechens and Dagestanis. This points out that the representatives of these two traditional cultures reveal similar densities in their ties with relatives. In this case, Chechens and Dagestanis (mostly) have a higher contact frequency with their relatives than Russians and Czechs. This is in accordance to Hypothesis 2a assuming individuals from traditional societies to have a denser family network than individuals from post-modernized societies. Further, we have assumed that Russians and Czechs would be very similar, but they are not. As a matter of fact, there are also quite large differences between the Russian and the Czechs. The density of contacts with their parents and adult siblings is higher among Czechs, while contacts with uncles/aunts and cousins seem more frequent among Russians.

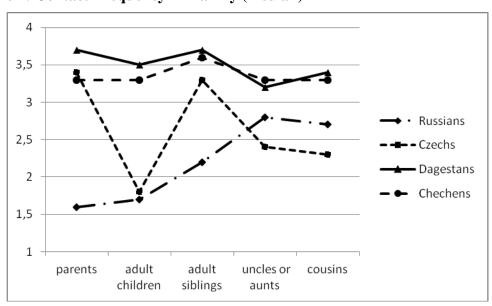


Figure 2: Contact Frequency — Family (median)

Note: Range of the scale from 1 to 4

Table 2: Significance of Interethnic Differences - Number of Contacts (Family)

How often you	Z	Z	Z	Z	Z	Z
had contacts	Rus/Cz	Rus/Dag	Rus/Chech	Cz/Dag	Cz/Chech	Dag/Chech
Parents	3.8***	6.2***	4.3***	1.3*	0.6	2.0**
Adult children	1.8*	3.7***	2.6***	2.6***	1.9**	.7
Adult siblings	2.8***	5.4***	5.4***	2.1***	1.9**	.7
Uncles or aunts	1.9***	2.5***	2.7***	2.9***	3.1***	.7
Cousins	2.1***	3.4***	3.6***	4.2***	3.4***	.6

Notes: Merged data from projects: "Social Relationships among Czech Citizens", and "Values and Economical Behavior"; Kolmogorov-Smirnov test (Z); N = 847; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05.

Figure 3 and Table 3 present the comparative analysis results of the number of friends of the four ethnic group respondents. The greatest differences appear regarding the number of friends apart from colleagues, neighbours and family members. The Czechs demonstrate the greatest number of friends apart from the neighbours, colleagues and family members, while Chechens have the lowest number of friends from this category. Additionally, Czechs have the most friends among colleagues. However, Hypothesis 2b seems not supported. First, Czechs also do not have significantly more friends among neighbours than do Dagestanis. Second, Russians maintain less friendship contacts with their neighbours than Dagestanis and Chechens. And third, Russians have less contact persons apart from colleagues and others than Czechs and Dagestanis. In sum, here we do not find a clear pattern of network composition caused by cultural background.

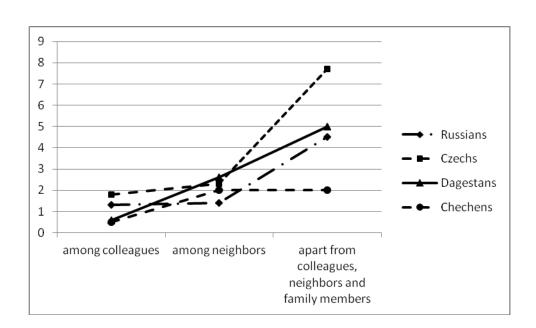


Figure 3: Number of Friends (median)

**Table 3: Interethnic Differences - Number of Friends** 

Number of friends	Z	Z	Z	Z	Z	Z
	Rus/Cz	Rus/Dag	Rus/Chech	Cz/Dag	Cz/Chech	Dag/Chech
among colleagues	0.4	2.2***	2.8***	1.3*	2.3***	1.5**
among neighbours	2.0**	2.5***	2.6***	0.9	1.7**	1.6**
apart from colleagues,						
neighbours,	2.3***	1.2	3.9***	1.4*	3.2***	3.3***
and family members						

Notes: Merged Data from projects: "Social Relationships among Czech Citizens", and "Values and Economical Behavior"; Kolmogorov-Smirnov test (Z); N = 847; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05.

Finally, Figure 4 and Table 4 display the differences of formal network embeddedness of the respondents of the four groups. To evaluate the significance in differences of respondents' answers to this question, the criterion  $\phi$  (Fischer's angular transformation) was used. Our results indicate that a very large number of differences have been observed between the cultures according to this criterion. Statistical analysis allows us to say that Hypothesis 2c is partially confirmed only. Indeed, representatives of post-modernized societies are active in more organizations than those in cultures of the traditional type. By this parameter the Chechens and the Dagestanis are very similar, but the Russians are somewhat different than the Czechs in this regard. Both the Russians and the Czechs have a greater number of organizations to which they belong than Chechens and Dagestanis. Nonetheless, a statistically significant difference between the Czechs and the Russians has also been observed, as the number of organizations to which the Russians belong is higher.

The more active participation of Russian respondents of Moscow region in activities of political parties, trade unions and non-profit organizations indicates that their social activity is higher. However, all this was expected. But, it was not supposed that the Russian respondents living in the Moscow region would show the highest level of participation in the activities of religious and charitable organizations. We think these results can be explained as follows. First, the Russians living in the Moscow region really can often take part in the activities of various charitable organizations, since the offices in Russia are located mainly in Moscow. Secondly, regarding the religious organizations, the respondents can differently perceive the fact of belonging. Russians pay attention to visiting churches or the like, while for Chechens and Dagestanis (as representatives of the collectivist culture), belonging to a religious organization does not mean visiting mosques, but actively taking part in the life of religious communities. In contrast, Russians attend sports clubs much more often than other groups. This can be explained by the fact that the Moscow region gives them more opportunities to do so. The infrastructure in the area is well organized and provides opportunities for residents to attend various clubs.

45 40 35 30 25 Russians 20 Czechs 15 Dagestans 10 Chechens 5 0 political church, sport or civic parties, trade religious interest associations, unions charity organization NGOs

Figure 4: Associational Participation (%)

**Table 4: Interethnic Differences – Participation in Associations** 

organizations

How often do you participate in the	φ	φ	φ	φ	φ	φ
activities of	Rus/Cz	Rus/Dag	Rus/Chech	Cz/Dag	Cz/Chech	Dag/Chech
political parties, trade unions or prof.	5.7***	7.6***	3.6***	2.1*	0.3	2.9*
assoc. (%)						
church, religious, charity	2.6**	5.1***	1,8*	0.9	0.3	2.5*
organizations (%)						
sport or interest organization (%)	1.49	7.0***	5.8***	3.4**	4.0**	0.25
civic associations, NGOs (%)	2.9**	3.7**	4.8***	1.3	0.05	1.6

Notes: Merged Data from projects: "Social Relationships among Czech Citizens", and "Values and Economical Behavior";  $\varphi$  (Fischer's angular transformation); N = 847; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05.

Social Capital. In a second step, we compare the social capital access of the four analyzed groups. Therefore, Figure 5 and Table 5 show the differences in the social capital access of the respondents originated by kinship. In most cases, Czechs access the highest amount of social capital from family. This is in contrast to Hypothesis 3a supposing individuals living in traditional societies access more social capital in their families than persons from post-modernized backgrounds. As regards Russians, social resource access by family appears to be lower than that of all other ethnic groups. With one exception, however, the Russians have more relatives who earn a lot. By this indicator they significantly differ from Czechs, but still do not differ from the Chechens and Dagestanis. Quite surprising is the fact that given these numerous differences, the representatives of all four ethnic groups showed no difference in terms of the number of relatives who could recruit personnel and enter into employment contracts.

Most likely, this indicator has low discriminatory power – the majority of the respondents have roughly the same resources in this field.

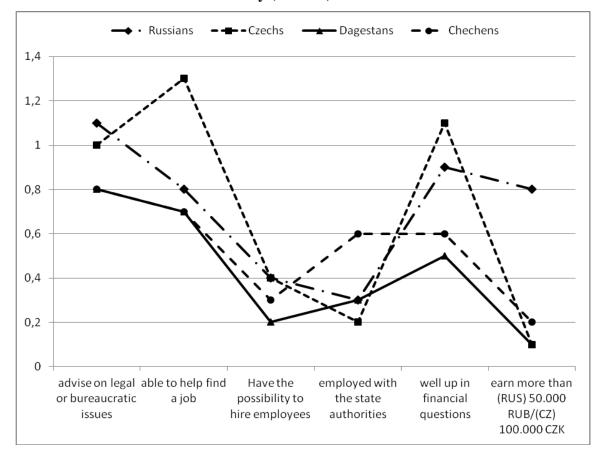


Figure 5: Resources Attained from Family (median)

**Table 5: Interethnic Differences - Resources Attained from Family** 

How many members of your	Z	Z	Z	Z	Z	Z
family	Rus/Cz	Rus/Dag	Rus/Chech	Cz/Dag	Cz/Chech	Dag/Chech
can advise you on legal or	0.2	1.6*	1.9**	1.1	1.6**	1.8**
bureaucratic issues						
will be able to help you find a job?	2.1***	1.3	1.2	1.7*	2.8***	1.5*
have the possibility to hire	1.2	2.9**	1.3	1.1	0.5	1.3
employees?						
are employed with the state	0.6	.5	3.7***	0.8	3.3***	3.7***
authorities?						
are well up in financial questions?	0.5	3.0***	2.1***	2.9***	2.1***	1.4*
earn more than (RUS) 50.000	4.2***	***	3.8***	0.1	0.7	.6
RUB/(CZ) 100.000 CZK monthly?						

Notes: Merged Data from projects: "Social Relationships among Czech Citizens", and "Values and Economical Behavior"; Kolmogorov-Smirnov test (Z); N = 847; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05.

Figure 6 and Table 6 show social capital indicators obtained from friends. According to this indicator the post-modernized Slavic cultures are distinctively different from that of the North Caucasus traditional cultures. Russians and Czechs access more of these resources than the Chechens or the Dagestanis, supporting Hypothesis 3b. It is likely that representatives of post-modern cultures more commonly and readily use this type of social capital than members of traditional cultures who primarily rely upon their family ties.

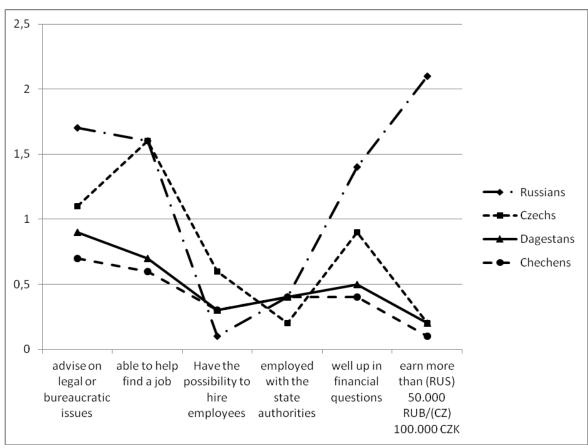


Figure 6: Resources Attained from Friends (median)

**Table 6: Interethnic Differences - Resources Attained from Friends** 

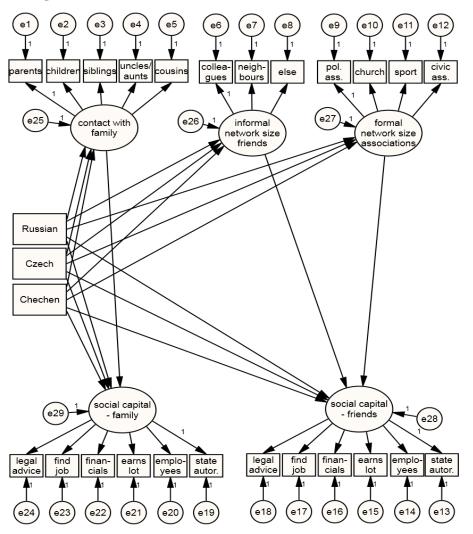
How many of your friends	Z	Z	Z	Z	Z	Z
	Rus/Cz	Rus/Dag	Rus/Chech	Cz/Dag	Cz/Chech	Dag/Chech
can advise you on legal or	1.5*	2.6***	4.1***	0.7	2.0***	2.5***
bureaucratic issues?						
will be able to help you find a	0.5	3.0***	3.2***	1.9**	2.6***	1.2
job?						
have the possibility to hire	1.7**	3.9***	3.7***	1.4*	1.8**	1.0
employees?						
are employed with the state	0.8	0.4	0.8	0.9	1.5*	1.0
authorities?						
are well up in financial questions?	1.0	3.3***	3.8***	1.8**	2.1***	1.6*
earn more than (RUS) 50.000						
RUB/(CZ) 100.000 CZK monthly?	5.0***	6.1***	6.5***	0.3	0.6	0.8

Notes: Merged Data from projects: "Social Relationships among Czech Citizens", and "Values and Economical Behavior"; Kolmogorov-Smirnov test (Z); N = 847; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05.

Summary. So far, our analyses indicate a clear difference between post-modern and traditional cultures regarding the composition of the family network and the social capital accessed by family. While the respondents from traditional ethnic groups have denser family networks than the respondents from post-modern ethnic groups, the latter access more social capital in their families. Regarding the friendship network and social capital it contains, we find no clear pattern regarding cultural background. Only post-modern countries seem to have bigger formal networks than traditional groups.

So far, the analyses did not allow us to test the relation between network embeddedness and social capital access. This will be done in the next part.

Figure 7: Structural Equation Model of Social Capital Access by Networks and Cultural Background



 $Notes: The \ analyses \ were \ controlled \ for \ sex, \ age, \ and \ education. \ Dagestan = reference \ category \ for \ cultural \ background.$ 

Multivariate Analyses: Structural Equation Model

In a third step, we calculated a Structural Equation Model (SEM), to test our hypotheses while controlling for other influencing factors like socio-demographic characteristics of the respondents. The calculated SEM is displayed in Figure 7. We constructed five latent variables. The factors 'contact with family', 'informal network size' and 'formal network size' indicate network embeddedness. The factors 'social capital - family' and 'social capital - friends' indicate accessed social resources from the respective groups. The reader finds the factor loadings in Appendix A.2 and the results of the SEM in Table 7.

Our results indicate that the cultural background of the respondent seems to play a crucial role in network composition and social capital access. We included 'dummy' variables indicating Russian, Czech, Chechen, and Dagestani origin, where Dagestani origin depicts our reference category. Generally, the SEM results are similar to the descriptive results in part 4.1 indicating the robustness of

our findings after controlling for further influencing factors. In comparison to Dagestanis, the Russians and Czechs have much less contact with their families, while Chechens do not differ from Dagestanis. The same pattern reveals the formal network size of both groups. Thus, the results support Hypotheses 2a and 2c. Individuals from post-modern countries have less contact with their families but larger formal networks than individuals of traditional countries. Here the family orientation respectively the 'extra-family' orientation of both groups becomes evident. Hypothesis 2b is not supported, as Russians and Czechs informal network sizes (friends) do not differ in comparison to the Dagestanis. After controlling for other variables, the small differences indicated by our descriptive results disappear. Chechens even have smaller informal networks than Dagestanis. This may be caused by the even more traditional and survival values held by Chechens than Dagestanis.

The social capital access seems to be better explained by ethnic background than network embeddedness. We do not find an influence of the family network embeddedness on family social capital. Thus, Hypothesis 1a has to be rejected. Here, the cultural background matters. First, when calculating the models without the variables regarding cultural background (not reported here), we find a slightly positive impact of contact with family on social resources accessed by family. Second, our model (see Table 7) including the cultural background variables reveals that Russians and Czechs access more social capital in their families than Chechens and Dagestanis – a result which is in contrast to Hypothesis 3a. It seems frequent contact with family members does not automatically mean that the family network is a resource rich surrounding. On the one hand, the family may be the wrong place for Chechens and Dagestanis to access resources of financial and prestigious means. On the other hand, the result also indicates that although Russians and Czechs have less contact with their families, they can more effectively attain resources from their family networks. This hints to an underlying explanatory factor: it is not the contact frequency that seems important, but the quality of the relationship. The family may not be perceived as a social capital source by individuals living in traditional societies, or may not have the means to provide social capital because of the low economic development. In traditional societies the families are broader and relatives live together including those with elderly parents. This leads to a higher frequency of contact between relatives. It means that a cultural lifestyle leads to a higher frequency of contacts between relatives. Such a lifestyle is not inherent in more modernized groups of Russians and Czechs. But, in post-modernized cultures, the family is likely to be considered as a source of social capital and has the means to provide resources, while in traditional cultures, despite the high involvement in family relationships and higher collectivism, the family is not a source of high social capital. This explanation is supported by the fact that collectivism is negatively correlated with social capital, while individualism has a positive relationship (Allik, Realo, 2004).

Viewing the social capital accessed by friend, the results of the structural equation model support Hypothesis 1b. We find the size of the informal network has a positive and significant impact on the amount of social capital accessed by friends. However, we do not find any influence of the formal network embeddedness on the friendship social capital, forcing us to reject Hypothesis 1c. Either participants in associations are not perceived as friends or formal networks are not perceived as sources of social capital. This can be explained by the dominance of informal networks developed during socialism (cf. Raiser et al., 2001). Regarding the social capital access by friends, cultural background does not seem to clearly exert an influence. Russians have a significantly higher social capital access from friends than Dagestanis. Czechs and Chechens do not differ in their social capital access from friends of Dagestanis. Accordingly, Hypothesis 3b is only partly supported. This result indicates that the stronger extra-family orientations of Russians and Czechs do not necessarily come along with resource mobilization in friendship networks. Again, this hints at the importance of the quality in the relationships. It is thinkable, that Dagestanis and Chechens – as they do not perceive or use their families as social capital sources – see their friendship circles as fruitful sources of social capital which diminishes the difference to at least Czechs as representatives of a society coined by secular-rational and self-expression values. Furthermore, Czechs may access most of their needed resources through their families, and thus, do not have to use their friendship circles as sources of social capital.

Regarding the control variables, our results are mostly in accordance to previous findings. The sex of the respondent does not influence the contact with the family; however, men seem to have bigger informal and formal networks than women. The education of the respondent does not influence the network compositions at all. Age only plays a role concerning contact with family members. The older respondents are the less contact they seem to have to their family members.

Table 7: Structural Equation Model: Standardized Effects of Independent Observed and Latent Variables

		dependent latent variables						
	contact with	informal	formal	social	social			
	family	network size	network	capital -	capital -			
independent variables			size	family	friends			
sex (1=female)	039	143***	208***					
Age	175***	070	.033					
Education (1= higher)	010	.050	022					
Russian	483***	.003	.358***	.251***	.086*			
Czech	334***	.027	.075*	.105*	036			
Chechen	.008	105**	.034	014	019			
formal network size					.035			
informal network size					.579***			
contact with family				.053				

Notes: Merged Data from projects: "Social Relationships among Czech Citizens", and "Values and Economical Behavior"; N = 847; ML estimations; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05; Model Fit: CFI =1.000; RMSEA= 0.000.

#### **Conclusions**

We analyzed the impact of cultural background on social network composition and social capital (=social resources) access. We assume that according to Ingleharts and Welzels (2010) cultural map, a significant difference exists between post-modernized cultures holding secular-rational values paired with self-expression values and traditional cultures holding traditional and survival values. While the former tend to have small families but big friendship and formal networks, the latter have extensive families and small extra family networks. Accordingly, we expected traditional societies to access most social capital in their families, and post-modernized societies to access most social capital in their extra family networks. To test these assumptions, we analyzed Czech and Russian survey data including four ethnic groups – Czechs, Russians from Moscow, Dagestanis and Chechens. According to the cultural map and our theoretical considerations, Czechs and Russians represent post-modernized Slavic cultures and Dagestanis and Chechens represent traditional North Caucasian cultures.

Our descriptive results regarding the family network composition and social capital access indicate that North Caucasus traditional peoples (Chechens and Dagestanis) are very similar to each other and differ from the European *post-modernized* Slavic peoples (Russians and Czechs). Nonetheless, Russians and Czechs differ. Russians have more contacts with uncles/aunts and cousins, while the Czechs are in frequent contact with their parents and siblings, indicating the predominance of the core-

family. Thus, Czechs seem even more modernized than Russians from Moscow. The friendship network patterns are quite similar regarding colleagues and neighbours. Differences occur with other friends, where Czechs have most. With respect to formal network embeddedness (organizations, associations), we have found many differences between ethnic groups, but all the same, we cannot argue that these differences are related to the mentioned dichotomy between post-modernized Slavic peoples and traditional North Caucasian peoples. Russians and Czechs participate more often in associations than Chechens and Dagestanis.

As regards social capital attained from the family network, we found a clear difference between the post-modernized and traditional groups. Russians and Czechs access the highest amounts of social capital, while Dagestanis are at the bottom of the list. The access of social capital from friends does not follow such a clear pattern.

Also our multivariate results are in line with the descriptive findings. They indicate that cultural background matters for social capital access but with some restrictions. Russians and Czechs have significantly less contact with their family members than Chechens and Dagestanis -something we expected from post-modern societies. Chechens have smaller informal networks than the respective groups, which may be caused by their traditional character. Also as expected, Russians and Czechs have bigger formal networks than the other groups. However, the social capital access is determined rather unexpectedly. Although we find that embeddedness in informal networks provides individuals with social resources from friendship networks, this is not the case regarding formal network embeddedness. Members of associations are not seen as friends or resources. This may be explained by the importance of informal networks developed under socialism (cf. Raiser et al., 2001). Another surprising result is evident regarding social capital access by family: the multivariate analyses indicate that contact frequency to family members does not predict social capital access from family, but the cultural background plays a crucial role. Russians and Czechs access more social capital in their families than Chechens and Dagestanis. This result can be explained as follows: individuals in post-modernized cultures may be more effective in accessing social capital in their family networks because they either perceive their families as sources of social capital, or the families have the means to provide resources. This result offers perspectives for future research, as our study has the capacity to assess the influence of cultural background on access to social capital with rather financial and prestigious focus only. The distribution of personal support resources were neglected in our study. However, one can suppose that the access to personal support social capital differs also between traditional and post-modernized societies, as the latter have more means to replace, for example, personal care by a welfare state institution.

Finally, our results indicate that the cultural background of our sample does not clearly determine the social capital access in the friendship networks. This result allows us to conclude that traditional as well as post-modernized societies are similarly able to create resource rich friendship networks.

Besides the limitation of social resource measures, our data does not allow us to further investigate the reasons why our respondents vary in their contact frequency to relatives or friends. One of the reasons for these differences may be cultural, or another reason may be a certain demographic situation of not having specific kinds of relatives. For example, Russians of the present generation tend to have no siblings, as their parents were likely to have only one child. Additionally their parents died at a young age on average. Evidence in favour of this idea is the fact that the Czechs, in comparison to Russians, have a significantly higher frequency of contacts with parents, brothers, and sisters, although they are also representatives of a postmodern culture. Furthermore, less family contacts increase the importance of extra-family contacts, which may explain the importance of friendship networks in social capital support for Russians.

From our point of view, research on social networks and social capital in the cultures that are at different stages of the modernization process has broad prospects. The results, which we obtained, are worth being tested for stability in other cultures as well. Furthermore, social capital can be considered not only at the individual level – as our study did – but also at the group and societal levels. Other indicators of social capital are used at these levels of analysis. Future research may be dedicated to socio-cultural modernization effects on social capital in groups and in post-modernized societies. A good starting point seems the analysis of changes in general, social or institutional trust in terms of the modernization process.

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## Appendix

### A1. Variable Description

Variable	Definition
Social Capital	1) How many members of your family:
•	2) How many of your friends:
	a) can advise you on legal or bureaucratic issues?
	b) are able to help you or another family member to find a job?
	c) have the possibility to employ people, close a contract with others, hire employees?
	d) work at the municipal or other types of state authorities?
	e) are well up in financial questions (tax, subsidies, social support, pension insurance)?
	f) earn more than (RUS) 50.000 RUB/(CZ) 100.000 CZK <sup>8</sup> monthly?
Family Network	Now I will name relatives you probably have, and you, please, tell me how often you had contacts -
	in person, by telephone or e-mail, with each of them in the last four weeks? (recoded: 1=I do not
	have living relatives of this kind, 2=not at all, 3=one or two times, 4= three or more times)
	1) parents (CZ: mother)
	2) adult brothers and sisters
	3) children that are 18 years and older
	4) siblings that are 18 years and older
	5) uncles, aunts and cousins
Friendship Network	1) Now we would like to ask you about your acquaintances from your workplace who are not
	members of your family or relatives. How many of them do you consider to be close friends of yours?
	2) And how many of people living in your neighborhood do you consider to be your friends?
	3) How many other friends do you have - apart from those at your workplace, in your
	neighborhood or among your family members?
Formal Network	In their free time people sometimes participate in activities of organizations such as sport clubs,
	leisure associations, charities, political parties etc. How often do you participate in the activities of
	such organizations? (dichotomized, 0=no, 1=yes))
	1) Political parties, trade unions or professional association
	2) Church, religious, charity organizations or public beneficial body
	3) Sport or interest organization
	4) Civic associations, non-government public organizations
Cultural Background	1) Russian, 2) Dagestan, 3) Chechen, 4) Czech
Sex	0 male, 1 female

<sup>8</sup> We are aware that the amounts of income differ. While the amount asked for in the Czech Republic represents approximately six times the monthly income, it is four times more than the average income in the Russian Federation only. However, the total amount is not relevant for our topic, only the fact that the respondent knows somebody earning much more than the average population – a claim, which is met by both indicators.

Age Years

Education 0 = lower education: (CZ) elementary and skilled; (RUS) basic secondary education, full secondary education, complete and incomplete vocational education.

1 = higher education: (CZ) A-levels and university degree; (RUS): incomplete higher education up to 3rd grade, A-level, completed bachelor degree, higher education specialist diploma, master

degree, and PhD.

Notes: RUS indicates the survey Values and Economical Behavior and CZ indicates the survey Social Relationships among Czech Citizens.

# **A2. Factor Loadings of Latent Variables (SEM)**

		informal	formal	Social	Social
	contact	network	network	Capital -	Capital -
	family	size	size		friends
contact frequency to					
parents	.547#				
children	.202***				
siblings	.554***				
uncles and aunts	.747***				
cousins	.745***				
number of friends					
among colleagues		.862#			
among neighbours		.354***			
other friends		.280***			
participation in					
political association			.583#		
church			.598***		
sports association			.720***		
civic association			.627***		
How many of your family members					
can advise you on legal or bureaucratic issues				.584***	
can help you to find a job				.353***	
is well up in financial questions				.738***	
earn more than 100.000 CZK/50.000 RUB monthly	У			.648***	
have to possibility to hire employees				.637***	
works in municipality or other state authorities				.443#	
How many of your friends					
can advise you on legal or bureaucratic issues					.331***
can help you to find a job					.783***
is well up in financial questions					.829***
earn more than 100.000 CZK/50.000 RUB monthly	y				.901***
have to possibility to hire employees					.955***
works in municipality or other state authorities					.777#

Notes: Merged Data: Social Relationships among Czech Citizens, and Values and Economical Behavior, N = 847; ML estimations; \*\*\*p<0.000, \*\*p<0.01, \*p<0.05, # regression weight set to 1.

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