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HUMAN DEVELOPMENT AND GENERALIZED TRUST: MULTILEVEL EVIDENCE

Generalized trust is one of the most debated topics in social sciences. A flood of papers attempting to examine its foundations has been published over the last few decades. However, only a handful of studies incorporates a multilevel approach and investigates how macro conditions shape the individual determinants of generalized trust. This investigation seeks to fill this gap, using the broad sample of the fifth round of the World Values Survey, multilevel regression modeling, human development as country-level moderator and trust in unknown people as a more perfect measure of generalized trust.

We took six theories of trust origin suggested by Delhey and Newton (2003) as a starting point, and demonstrate that along with common factors (such as particularized trust and confidence in institutions), generalized trust can be influenced by a set of specific determinants which differ depending on the level of human development. In poorly developed societies, financial satisfaction was the only indicator that fostered generalized trust, while education decreased it. In highly developed countries it was active membership, open-access activities, emancipative values, age and education which contributed to the strengthening of trust.

Key words: generalized trust, trust radius, trust theories, human development, multilevel regression modeling, moderation effect

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1. Introduction

Trust, one of the most important ingredients for social life, eases human interactions and creates a solid basis for prolonged and successful cooperation between people. Therefore, the issue of what factors favor the creation and expansion of generalized trust, has always played an important role in ongoing debates on social capital. Numerous endeavors to reveal these triggers have resulted in a voluminous and extensive literature (see recent reviews of Nannestad, 2008; Stolle, 2002; Welch et al., 2005). While scholars have made some progress, there is still a lack of studies, which test various determinants of generalized trust using a broad sample of countries and concentrating on the simultaneous estimation of individual and societal conditions. This approach may shed an additional light on the nature of generalized trust, and demonstrate how environment of a country moderate the impact of individual characteristics. Beugelsdijk emphasizes that there is a clear need for a multilevel framework in studies of social capital, given that any «micro phenomena are embedded in the macro context» (Beugelsdijk, 2009: 77).

Delhey and Newton (2003) conducted one of the first studies which demonstrated the difference in the foundations of generalized trust across countries. They identified six theories of the origins of trust, and tested them against each other using Euromodule surveys fielded between 1999 and 2001 in seven countries, including East and West Germany, Hungary, Slovenia, Spain, Switzerland and South Korea. According to their analyses, the six theories indeed worked differently in societies with high and low levels of generalized trust (Delhey & Newton, 2003). They found that, in highly trusting societies, personal success and subjective well-being played the most important role for its strengthening, while in low trusting societies, successful informal relations with a circle of acquaintances and perceived living conditions came on the scene. Surprisingly, membership in voluntary associations, which had been commonly treated as «schools of trust», had a significant but also rather weak impact in only three out of seven societies (Delhey & Newton, 2003). Similarly, Freitag (2003), when comparing Japan and Switzerland, pointed out that interactions in voluntary organizations were important for Japanese people, but they added nothing to Swiss people's generalized trust. Moreover, according to his results, the influence of individual values and psychological variables also varied across two countries (Freitag, 2003). Robbins (2011) noted that the effect of voluntary associational membership on trust was greater in countries where institutions protected property rights more effectively. Park and Sabramanian (2012) stressed that income inequality at the country level decreased the positive impact of voluntary membership. Newton and Zmerli (2011) showed the amplifying effect of aggregated generalized trust on individual trust.

Putting all these things together, we can conclude that the issue of how social context shapes the foundations of generalized trust requires a more detailed examination. We take Delhey and Newton's six theories as a starting point and test them against each other, contributing to the existing literature in several key ways. First, to validate Delhey and Newton`s findings and check them for robustness we adopt the broadest evaluable dataset – the fifth wave of the World Values Study (henceforth WVS), conducted in 2005-2008. Second, instead of traditional trust question, which ask whether most people can be trusted, we use a question about trust in people one meets for the first time, as we considered it as a better measure of generalized trust. Third, we enrich the current trust theories with emancipative values and non-institutional forms of civic participation, such as signing petitions and taking part in boycotts and demonstrations. Fourth, we incorporate human development as a main variable at the country-level, and demonstrate how it moderates the impact of personal characteristics. Fifth, we use multilevel regression modeling with cross-level interaction terms in order to take into account the moderating effect of country-level conditions. Although several attempts to investigate generalized trust within the framework of hierarchical regression modeling have already been undertaken recently (Delhey & Welzel, 2012; Geys, 2012; Gheorghiu et al., 2009; Hamamura, 2012; Newton & Zmerli, 2011; Park & Subramanian, 2012; Paxton, 2007; Robbins, 2011), they

all lack one or more of the conditions mentioned above. We are not aiming to solve the causality puzzle, but are instead seeking to discover how human development of a country affects associations between generalized trust and other phenomena.

The remainder of the paper is organized as follows. In the first section we outline the six theories suggested by Delhey and Newton and enrich them with evidence from studies conducted during the previous decade. The second section discusses the limitations of the traditional trust question and alternative ways of measuring generalized trust. In the third section, we describe the data, variables and methods. The fourth section demonstrates country-level relationships between generalized trust and human development, and provides multilevel evidence. In the last section, we discuss our results and present our subsequent conclusions.

2. Six theories of the origins of trust

Delhey and Newton (2003) stress the multidimensional and complex nature of trust, and classify existing studies into six groups of determinants, with three levels of analysis. They identify a) *personality and b) success and well-being theory* at the individual level; *c) network theory, d) voluntary organization and i) community theory* at the social level; and *f) societal conditions theory* at the societal level.

Personality theory sees trust as a psychological trait, which is slowly modified by adult experiences. From this perspective, trust should be closely linked to trustfulness or propensity to trust others, which is either inherited or learned through primary socialization, and which ought to be closely associated with a set of other personality traits. There is empirical evidence that trusting attitudes do indeed positively correlate with extraversion, self-control (locus of control), intelligence and an optimistic view of the world (Oskarsson et al., 2012; Sturgis et al., 2010; Uslaner, 2002; Wollebaek et al., 2012). Nevertheless, Delhey and Newton (2003) demonstrate that this is not a culturally universal pattern. They found that self-control was not associated with generalized trust, while optimism only had a significant positive influence in Switzerland. In addition, Freitag and Traunmüller (2009) failed to discover any relationship between generalized trust and self-control in Germany.

Unlike personality theory, the *success and well-being theory* emphasizes the importance of positive life experiences in generating trust. A large proportion of surveys indicate that successful and happy people are usually more trusting, and vice versa. Using time series and cross-sectional data from the USA, Bjørnskov (2008) detects a strong positive relationship between generalized trust and subjective well-being. Similar results come from studies conducted in Canada, Belgium, Luxembourg, Japan and rural China (Helliwell & Putnam, 2004; Hooghe & Vanhoutte, 2011; Klein, 2013; Kuroki, 2011; Leung et al., 2011; Yip et al., 2007). A large amount of cross-cultural data supporting this interlink has also been obtained from European region, Asia and a wide range of countries participated in different waves of the World Values Survey (Allum et al., 2010; Elgar et al., 2011; Freitag & Buhlmann, 2009; Helliwell & Putnam, 2004; Puntscher et al., 2014; Rodríguez-Pose & von Berlepsch, 2014; Robbins, 2011; Tokuda et al., 2010; van der Veld & Saris, 2012; Yamaoka, 2008).

However, Sulemana (2014) notes that a strong positive relationship between generalized trust and subjective well-being is not common in Ghana. Moreover, Sarracino (2013) reveals that this link is moderated by economic development of a country. It only keeps significance in high-income countries, while it is non-existent in low-income countries.

Socio-economic status in terms of education and income can be considered as an additional indicator of success. Brehm and Rahn (1997) incorporating latent variable framework and polled data from the US General Social Survey conducted between 1972 and 1994 discover positive impact of education and income on generalized trust. These findings are validated further by Alesina and La Ferrara (2000), Putnam and Helliwell (2007) and in the study by Rahn and colleagues (2009) across 49 American communities. The same results are found for the United Kingdom (Sturgis et al., 2009), in countries which participated in the 1st wave of the

European Social Survey (Howard & Gilbert, 2008; van der Veld & Saris, 2012; Wollebæk & Selle, 2007); in the 2nd wave of the European Values Survey (van Oorschot et al., 2006); and in the 4th and 5th waves of the World Values Survey (Park & Subramanian, 2012; Robbins, 2011). In addition, the positive impact of education on generalized trust is also noted for the 2nd (Geys, 2012; Paxton, 2007) and the 5th wave of the World Values Survey (Delhey & Welzel, 2012; Newton & Zmerli, 2011).

In contrast, scarce resources, discrimination and traumatic life experiences are supposed to decrease generalized trust. Based on a survey in 33 Swedish municipalities and a multilevel regression analysis, Wollebaek et al. (2012) conclude that unfair treatment by authorities or a private person and being a victim of crime lead to a lower level of generalized trust. Alesina and La Ferrara (2000) confirm the negative impact of distressing events (i.e. divorce, deaths, unemployment or disability) on generalized trust. Brehm and Rahn (1997) demonstrate similar dependence. According to their calculations, unemployed, black people and respondents who experienced a burglary during the previous year tend to be less trusting. Geys (2012) and Paxton (2007) as well as Rahn et al. (2009) report the negative impact of divorce on trust.

Although all these studies support the success and subjective well-being theory, the existing evidence still lacks some consistency. For example, Soroka et al. (2007) note that education in Canada has a positive influence but that the effect of income is insignificant. According to Delhey and Newton (2003), education has a positive link with trust in Hungary and Switzerland, but not in Slovenia, Spain, South Korea or Western and Eastern Germany. Buzasi (2015) uses data from 20 African countries, which participated in the Afrobarometer, and shows the negative effect of education. In Delhey and Welzel`s analysis divorce has no impact at all on generalized trust (Delhey & Welzel, 2012).

The *Voluntary organization theory* is one of the most contested approaches in the literature on social capital. According to Putnam (Putnam, 2001) formal associations are considered to be the «schools» where people learn civic norms, values and generalized or bridging trust through interactions with unknown people and members of out-groups. However, the empirical results supporting this idea are mixed and inconsistent. Some local (Brehm & Rahn, 1997) and cross-cultural studies (Allum et al., 2010; Dekker & Broek, 2005; Geys, 2012; Paxton, 2007; van Oorschot et al., 2006) demonstrate strong positive relationship between participation in voluntary associations and generalized trust. At the same time, Freitag (2003) did not reveal a statistically significant link in Switzerland, Delhey and Newton (2003) failed to find it in Slovenia, Spain and South Korea, neither did Dekker and Broek (2005) in Iceland, nor Howard and Gilbert (2008) in the USA.

The discrepancy in the extant literature could be attributed to several reasons. First, it seems that the impact of civic participation differs depending on the type of association. The main idea behind this distinction is to draw a line between associations which create plausible outcomes for society, and associations which protect and pursue the interests of specific groups and do not contribute to extending trust or generate «dark» social capital. For example, Paxton (2007) divides participation into connected and isolated types, where isolated participation refers to membership of one association and connected participation refers to membership of several associations. Only multiple membership link associations with each other and to the broader community diversifying interactions and expanding generalized trust beyond the group boundaries. Paxton's results obtained from 31 nations that took part in the 2nd round of WVS indicate that at the country-level, connected civic activity does indeed facilitate general trust, while isolated activity slightly erodes it. At the individual level, both types of membership affected generalized trust in a similarly positive way. In addition, the impact of connected membership is found to be almost equal to the impact of any membership. Geys (2012) who validates her typology based on the 2nd and the 4th waves of WVS, comes to the same conclusion about individual-level dependence. In contrast, the 5th wave of WVS provides evidence to support the fact that any membership has no effect on generalized trust, whereas connected membership increases it (Delhey & Welzel, 2012).

Another group of scholars argues that the level of involvement may shed an additional light on the relations between associational membership and generalized trust. Howard and Gilbert (2008) distinguish passive membership from active and super-active membership. However, their analysis reveals that this distinction has some limitations. Although this works well in Eastern European countries, where only super-active membership has a significant and robust impact on generalized trust, in Western European countries all forms of participation are conductive for generating social capital, but compared to passive involvement, the impact of super-active membership is only slightly stronger. Conversely, Wollebæk and Selle (2007) stress that affiliation has a more stable effect than activity within associations and scope of involvement. Unlike Howard and Gilbert`s study, they found an insignificant positive influence of intensity and membership scope in Eastern European countries, while in Western European countries intensity did foster generalized trust, but its strength was almost equal to that of passive affiliation.

The second explanation for the conflicting empirical results on voluntary organization theory may be attributed to the issue of causality between generalized trust and civic participation. More trusting people self-select themselves into civic associations but not the other way around (Rothstein & Stolle, 2008; Sonderskov, 2011; Uslaner, 2002). In order to test this suggestion, research requires panel data which is specifically designed to handle causation problems. However, the existing evidence is intriguing and raises new questions rather than provides clear answers. Using a youth and parent sample from the Michigan Socialization Study collected between 1965 and 1982, Claibourn and Martin (2000) do not detect even a reciprocal relationship between generalized trust and participation for their youth sample. Neither the present nor the lagged level of trust encourages membership. Regression models with generalized trust as a dependent variable demonstrate the same results. The previous and current experience of participation does not have any significant impact. The parent sample confirms the findings on the influence of trust on participation, but draws a slightly different conclusion about the impact of participation on generalized trust. Although contemporary activity in voluntary associations has significant positive influence, surprisingly, prior group membership decreases generalized trust (Claibourn & Martin, 2000).

Van Ingen and Bekkers (2013) analyze panel data fielded in Switzerland, the Netherlands, Australia and the United Kingdom, and come up with similar results. They find only limited support for the idea that civic participation facilitates generalized trust and no differences between types of organizations and level of involvement. When attempting to explain the correlation between current trust and the current membership they put forward a hypothesis that these two phenomena belong the same «social syndrome». This means that «those who subscribe to prosocial values, who have good social skills and who are generally outgoing are more likely to be both more civically engaged and trusting» (van Ingen & Bekkers, 2013:14). This idea seems quite plausible, since values may be a missing chain linking civic attitudes to civic behavior. Unfortunately, the role of values has thus far not been the focus of trust/membership debates. However, recent studies do reveal the positive impact of emancipative, post-materialistic and individualistic values on generalized trust (Delhey & Welzel, 2012; Gheorghiu et al., 2009; Rahn & Transue, 1998).

The third reason for inconsistencies in empirical findings on relations between trust and associational membership may be due to underestimated role of non-institutional forms of civic engagement (e.g. petitions, boycotts, demonstrations) which are becoming more and more important in the modern era. While formal associations differ in terms of size, goals and connectedness with the broader community, non-institutional activities by definition imply interactions with unfamiliar people and, in that way, should facilitate generalized trust (Delhey & Welzel, 2012). This way of theorizing is not pure speculation, and has empirical support from several waves of WVS (Delhey & Welzel, 2012; Welzel et al., 2005).

Finally, for the sake of clarity it is worth mentioning that the link between generalized trust and participation may be moderated by societal conditions. As mentioned in the

introduction, the effect of associational membership on trust is greater in countries with lower levels of economic inequality (Park & Subramanian, 2012) and institutions that properly protect property rights (Robbins, 2011).

Proponents of the *network theory* emphasize the role of social networks, every-day interactions and informal relations. Although there is no doubt that informal ties are an important factor for generalized trust, there is still no consensus whether their impact is conducive or detrimental. Seminal studies of Banfield (1958), Fukuyama (1995) and Yamagishi (2011) proclaim the negative effect of in-group ties on generalized trust. At the same time, exiting empirical studies show mixed and conflicting results. On the one hand, the World Values Survey and European Values Study demonstrate the damaging influence of family ties on generalized trust (Alesina & Giuliano, 2013; Realo et al., 2008; van Oorschot et al., 2006). On the other, panel data from the UK and US, as well as data from some countries that participated in the European Social Survey reveals the fostering effect of neighborhood attachment and communication with friends and relatives (Glanville et al., 2013; Li, 2005; Lolle & Torpe, 2011; Patrick Sturgis et al., 2009; van der Veld & Saris, 2012). Furthermore, a number of scientific endeavors detect positive link between generalized trust and trust in known people or particularized trust (Delhey & Welzel, 2012; Freitag & Traunmüller, 2009; Glanville & Paxton, 2007; Newton & Zmerli, 2011; Uslaner, 2002).

It is worth noting that Delhey and Newton (2003) use the label «network» in a slightly different way than it is usually used in social network analysis (SNA). In order to avoid terminological vagueness and ambiguity, we will adopt the term «informal relations theory» throughout the text.

Community theory focuses on the characteristics of local communities, such as the size of the city, population density or community safety (Delhey & Newton, 2003). However, this type of determinant has not been the focus of social capital studies. Therefore, existing evidence is insufficient and lacks coherence. Soroka et al. (2007) and Rahn et al. (2009) find that population density adds nothing to generalized trust in Canada and the USA. At the same time, Rahn et al. (2009) show that population size negatively affected generalized trust. Van der Veld and Saris (2012) discovered a similar dependence in Italy, Netherland, Portugal and Slovenia. Conversely, this effect is positive in Finland, Poland, Slovenia and Switzerland, whereas it is insignificant in a number of other European countries (Delhey & Newton, 2003; van der Veld & Saris, 2012). The impact of perceived safety is also unstable and country specific. According to Delhey and Newton (2003), in Slovenia, Hungary, East Germany and Switzerland people who feel unsafe walking at night have less trust in strangers albeit in Spain, West Germany and South Korea, insecure surroundings do not deter generalized trust.

The *Societal conditions theory* concentrates on the macro-level and takes into account states' characteristics as units of analysis. The impact of societal conditions can be captured either through subjective assessments of individuals or through objective statistics which reflect different dimensions of societies. Incorporating the subjective approach, Delhey and Newton (2003) conclude that societal theory is one of strongest predictors of generalized trust but again, its influence is not universal. According to their study, social conflicts between different groups (e.g. rich and poor, management and workers, national and immigrants) negatively influence generalized trust in 5 out of 7 countries. At the same time, a number of local and cross-cultural studies exhibit a robust positive link between institutional and generalized trust (Allum et al., 2010; Brehm & Rahn, 1997; Freitag, 2003; Freitag & Traunmüller, 2009; Newton & Zmerli, 2011; Robbins, 2011; Robbins, 2012; Rothstein & Stolle, 2008; van Oorschot et al., 2006).

The objective approach is most commonly used when modeling aggregate data. Numerous scientific studies demonstrate that, in countries with a higher level of economic development, and where there are more effective democratic and civic institutions, the level of trust is also higher (Delhey & Newton, 2004; Delhey & Welzel, 2012; Knack & Keefer, 1997; Whiteley, 2000; Zak & Knack, 2001). A post-communist past and social cleavages reduce generalized trust in the country (Bjørnskov, 2007).

Given evidence from all the theories, we can conclude that it is mixed and inconsistent. This inconsistency itself is an important outcome, since it points out that societal conditions and the way how generalized trust is operationalized may have a profound influence on the results of any trust study. As mentioned in the introduction, generalized trust is a multilevel phenomenon where micro and macro foundations are intertwined with each other (Beugelsdijk, 2009). In the remainder of the article, we test all six theories against each other using multilevel regression modeling and the level of human development as a macro moderator for individual determinants.

3. Measurement of Generalized Trust

For several decades, generalized trust has been measured through a standard question: «Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?» Nowadays its validity has been criticized for a number of reasons. The first line of critique deals with the issue of the trust radius. Previously, it has been taken for granted that its wording captures generalized trust, implying that «most people» refers to out-groups (e.g. people of another religion or people of another nationality) and unknown people. Recent studies have cast doubts on this suggestion. Sturgis and Smith (2010) show that in the UK, 42% of people answering the traditional trust question have family, friends and colleagues in mind. Delhey et al. (2011) and Torpe and Lolle (2011) detect significant variance of the trust radius across countries that participated in the 5th round of the WVS. In some African and Asian countries, it corresponds to family members, neighbors and people that they know personally, indicating *particularized instead of generalized trust*.

The second line of criticism emphasizes the concern for two dimensionality of traditional measure. While the first part of the question captures trusting attitudes, the second one reflects caution instead of distrust. Hence, trust and caution are not the opposite ends of the same scale, they are not mutually exclusive and may exist simultaneously (Miller & Mitamura, 2003). By splitting the scale and asking American and Japanese students about trust and caution separately, Miller and Mitamura (2003) demonstrate that a) these measures do indeed belong to different dimensions and b) that Americans are more trusting, but at the same time more cautious, whereas Japanese people are less trusting and less cautious.

Considering all these points, there is a clear need for a better measure of generalized trust, which is free from the trust radius or trust-caution problems. The 5th round of the WVS offers an opportunity to tackle this difficulty. Along with the traditional measure, it asks about trust in people of another nationality, people of another religion and people one meets for the first time. Newton and Zmerli (2011), and Delhey and Welzel (2012) average these items into an additive index. This procedure seems to be more valid, but remains imperfect from theoretical point of view.

Traditionally, scholars define generalized trust as an attitude towards people in general. In order to emphasize its all-inclusive nature, they consider trust in unknown people and trust in out-groups as empirical referents for generalized trust and, therefore, use these two kinds of trust as synonyms constantly and interchangeably. However, this suggestion may be misleading. Trust in people of another religion and another nationality is more likely to capture out-group tolerance. Given that nationality and religion are not the only criteria for classifying people into in-groups and out-groups it could be said that these two indicators are not as all-inclusive. Indeed, previous analyses demonstrate that in almost all societies from the 5th wave of the WVS, the level of out-group trust is higher than the level of trust in strangers (Almakaeva, 2014). Therefore, out-group trust is a prerequisite but not a sufficient condition for generalized trust. In addition, Freitag and Bauer (2013) point out that these two forms of trust belong to different dimensions. Taking into account this evidence, we can consider trust in strangers as a more adequate indicator of generalized trust than the additive index of out-group trust or distinct questions about trust in people of another nationality and religion.

4. Data, variables and methods

Main variables at the individual level

For the empirical analysis, we use individual data from the 5th round of the World Values Survey, conducted in 2005-2008. The broad sample of the fifth wave covers Europe, Asia, Africa, Latin America, North America and Australia (WORLD..., 2009). In total, the 5th wave includes 57 countries, but due to missing cases we reduced the number of countries to 47.

As mentioned above, we consider trust in people that one meets for the first time as a better measure of generalized trust and therefore treat it as the main dependent variable. It is measured through four-point scale from «do not trust at all» to «trust completely». To test trust theories, we incorporate a set of independent variables into the investigation including the locus of control, an index of subjective well-being, financial satisfaction, active membership in civic associations, non-institutional forms of protest, emancipative values, trust in known people, confidence in different institutions, age, gender and education.

To test the personality theory we adopt the locus of control (self-control), which is most commonly defined as a belief that a person can control his/her life and events happening around him/her. In accordance with this definition, we measure locus of control through the question: «Some people feel they have completely free choice and control over their lives while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means «no choice at all» and 10 means «a great deal of choice» to indicate how much freedom of choice and control you feel you have over the way your life turns out».

In order to operationalize the success and well-being theory, we incorporate the additive index of subjective well-being, which combines happiness and life satisfaction, and financial satisfaction. Due to the large number of missing values, we do not include subjective social class and household income in the analysis.

Unlike the Euromodule surveys used as the main data sources in Delhey and Newton`s analysis (2003), the WVS does not include items on loneliness, number of close friends and frequency of contact. Therefore, to test the informal relations theory we adopt a measure of trust in people one knows personally. We see it as a proxy for comfortable and secure relations within the circle of acquaintances.

As mentioned above, there are several ways to operationalize formal membership. We use a simple measure of active membership in voluntary organizations. We do not differentiate between the «dark» and «light» civicness, or different types of associations because we are aiming to concentrate on the general relationship between trust and associational membership and save degrees of freedom.

In line with our assumptions, as stated in section 2, we see that it is plausible to enrich the voluntary organization theory with the additive indexes of non-institutional forms of protest (petitions, peaceful demonstrations, boycotts) and emancipative values. According to Welzel (2013), emancipative values are the combination of four attitudinal components, covering autonomy, choice, equality and people`s voices. Table 1 in Appendix A illustrates how the emancipative values are constructed in detail.

The size of town reflects the community theory. Although this variable had many countries that are omitted, this is the only community indicator evaluable in the fifth round of the WVS. Therefore, we test it in the current study.

In their original work, Delhey and Newton (2003) measured the impact of the societal conditions theory through the perception of social conflicts, satisfactions with public safety, satisfaction with democracy and achievement of public goods. Unfortunately, the fifth wave questionnaire does not ask about any of these aspects. By that reason as proxy for this approach, we see confidence in different institutions (i.e. government, political parties, parliament, police, courts, army, civic service and charitable organizations) which reflects an overall feeling of their effectiveness.

Main variables at the aggregate level

We treat the level of human development as a moderator at the country-level. To measure it we utilize the index of human empowerment suggested by Welzel (2013). Human empowerment is the revised version of the modernization theory, which considers the evolution of humankind as a threefold process integrating economic, cultural and institutional dimensions (Inglehart & Welzel, 2005; Welzel, 2013). Since previous studies demonstrate that generalized trust is positively associated with economic growth, institutional effectiveness and emancipative values (Delhey & Newton, 2004; Delhey & Welzel, 2012; Knack & Keefer, 1997; Whiteley, 2000; Zak & Knack, 2001) we see it as a better and more substantial measure of development as compared to Human Development Index.

To measure it, we follow Welzel (2013) and create an additive index averaging three main domains: economic, cultural and institutional. The Quality of Government Dataset (Teorell et al., 2011), collected by the Quality of Government Institute, provides country statistic on GDP per capita corrected for purchasing power parity, as well as Gini index and ethnic fractionalization index (Alesina et al., 2003) which we use as control variables at the country level. The aggregate country means of emancipative values reflects the cultural dimension. To capture the institutional dimension, we use the index of citizen`s rights (Welzel, 2013) that combines Freedom House's data ratings (2012) and the Human Rights Data Project (Cingranelli & Richards, 2010). It is more perfect measure of institutional effectiveness, compared to the most commonly used World Bank Governance Indicators (Kaufmann et al., 2008) since it simultaneously contains data on civil liberties and political rights obtained from expert judgments (Freedom in the World, 2012) and officially documented information (Cingranelli & Richards, 2010). All variables are within the range from 0 to 1.

Methods

This study follows multilevel approach and investigates the relationship between generalized trust and its possible determinants at the macro and micro level. Delhey and Welzel (2012) demonstrated the strong positive association between human empowerment and the index of out-group trust. In this investigation, we treat trust in people that a person meets for the first time to be a better indicator of generalized trust. We begin with an aggregate analysis, in order to test the robustness of previous findings and demonstrate the distribution of trust in strangers across countries with different levels of human empowerment. Then we proceed to the multilevel linear regressions with random effects and cross-level interactions, which allow us to examine how the level of human empowerment moderates the individual-level determinants of generalized trust. Our multilevel analysis occurs in two steps. First, we test six theories of generalized trust separately to detect the predictive power of each theory and then we test them against each other.

5. Results
Country-level evidence

Table 1 shows the descriptive statistics for the main variables.

Table 1. Descriptive statistic

	Number of observations	Mean	Standard Deviation	Minimum	Maximum
Variables at the individual level					
Trust in unknown people	65351	0.33	0.26	0.00	1.00
Locus of control	65715	0.68	0.26	0.00	1.00
Happiness	66903	0.70	0.25	0.00	1.00
Life satisfaction	66711	0.65	0.26	0.00	1.00
Finansial satisfaction	63692	0.54	0.28	0.00	1.00
Active membership	66561	0.12	0.22	0.00	1.00
Non-institutional protest	65041	0.17	0.28	0.00	1.00
Emancipative values	67528	0.43	0.18	0.00	1.00
Trust in known people	66257	0.67	0.26	0.00	1.00
Town size	43845	0.54	0.36	0.00	1.00
Confidence in institutions	66829	0.50	0.22	0.00	1.00
Tolerance	63966	0.83	0.29	0.00	1.00
Female	67482	0.52	0.50	0.00	1.00
Age (rescaled)	67309	0.42	0.17	0.15	0.98
Educational level	67069	0.53	0.31	0.00	1.00
Variables at the country level					
Human empowerment	47	0.26	0.17	0	0.61
Trust in unknown people	47	0.33	0.08	0.16	0.56
Trust in known people	47	0.67	0.09	0.47	0.87
Gini	47	0.40	0.09	0.25	0.59
Ethnic fractionalization	47	0.42	0.24	0.00	0.78
Active membership	47	0.08	0.05	0.1	0.17
Countries included in the analysis	Argentina, Australia, Brazil, Great Britain, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Cyprus, Egypt, Ethiopia, Finland, France, Georgia, Ghana, India, Indonesia, Italy, Jordan, Malaysia, Mali, Mexico, Moldova, Morocco, Netherlands, Norway, Peru, Poland, Romania, Russian Federation, South Africa, South Korea, Slovenia, Spain, Sweden, Switzerland, Taiwan, Thailand, Trinidad and Tobago, Turkey, Ukraine, Uruguay, United States of America, Vietnam, Zambia				

Figure 1 plots the distribution of trust in unknown people (a corrected measure of generalized trust) across nations with different levels of human empowerment. In general, this works in the same direction as Delhey and Welzed's (2012) index of out-group trust, where higher levels of human empowerment are associated with more generalized trust. At the same time, the apparent non-linear nature of these relationships is an issue which is worth mentioning. While the linear model explains about 30% of the country-level variation, models with a squared empowerment index add extra 24% to R^2 (see Table 2). These non-linear relationships indicate that the effect of human empowerment on trust differs depending on the level of human empowerment and may be negative. This effect remains robust even after controlling for aggregate particularized trust, active membership in associations, social inequality and ethnic fractionalization which, as previous studies demonstrate, are considered to be the significant predictors of generalized trust (Bjørnskov, 2007; Delhey & Newton, 2004; Delhey & Welzel, 2012) at the country-level.

Fig.1 Human empowerment and generalized trust (trust in unknown people) in 2005-2008.
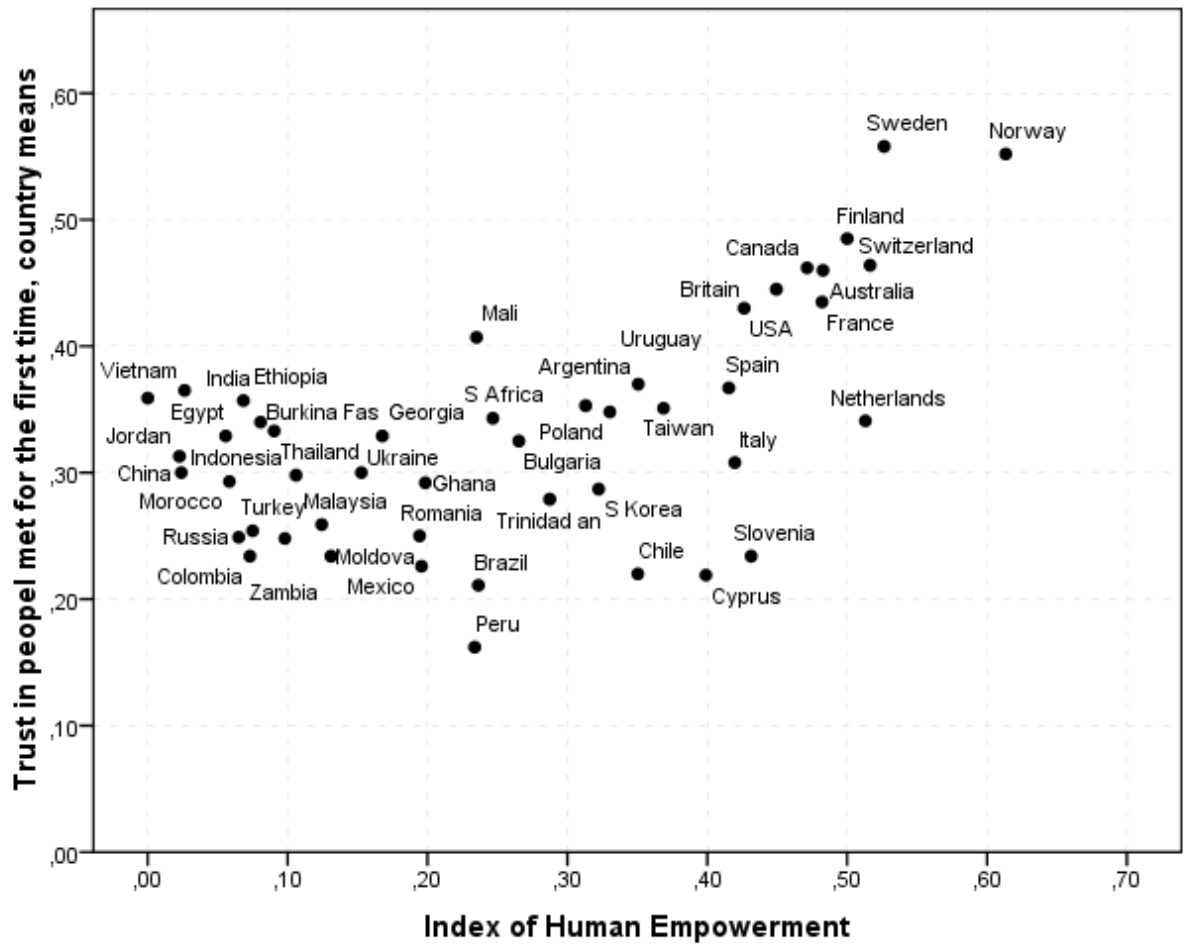
Table 2. Country-level linear regressions with generalized trust (trust in unknown people) as a dependent variable (data from 2005-2008).

	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	0.255(0.069)***	0.338(0.016)***	-0.069(0.072)	-0.112(0.0754)	-0.073(0.104)
Human empowerment	0.294(0.017)***	-0.681(0.178)***	-0.313(0.157)*	-0.319(0.139)*	-0.298(0.141)*
Human empowerment^2		1.763(0.323)***	0.769(0.294)**	0.723(0.267)**	0.713(0.261)**
Trust in known people			0.604(0.102)***	0.634(0.104)***	0.616(0.105)***
Active membership				0.368(0.123)**	0.302(0.131)**
Gini					-0.108(0.085)
Ethnic fractionalization					0.041(0.035)
R^2	0.319	0.562	0.735	0.771	0.783
N of countries	47	47	47	47	47

Significance Levels: *** $p<0.001$, ** $p<0.01$, * $p<0.05$, unstandardized regression coefficients are reported, robust standard errors are in parenthesis. Calculations are done with Stata 12.0.

In the framework of regression modeling with interaction term, all the independent variables are seen as functions of the moderator, therefore, slope coefficients and standard errors depend on the specific value of the moderator (Brambor et. al, 2005; Jaccard & Turissi, 2003). As Brambor et al (2005) note, in that case the «traditional table of results can only throw a limited light» on the tested hypothesis, since it only reports the impact of the independent variable when the moderator is equal to zero (Brambor et al., 2005: 72). In order to provide a substantive interpretation, we rescaled the human empowerment index, and obtained values of zero for countries with low (Egypt) middle (Romania) and high (Norway) levels of human empowerment. Tables 3-9 report the coefficients and robust standard errors for all the societies examined. All calculations are done using HLM 7.0.

Tables 3 shows that, along with age, gender and education, the locus of control from the personality theory explains approximately 6% of the variation in generalized trust at the individual level and 37.7% at the aggregate level. It becomes insignificant in societies where human empowerment is low, but does rather well at its middle and high stages. However, this positive effect is not robust and disappears in the simultaneous estimation of determinants from all trust theories (see Table 9).

Variables from the success and well-being theory account for 6.7% of the variance at the individual-level and about 50% at the country-level (see Table 4). Whereas overall subjective well-being is positively associated with trust at the middle and high stages of human empowerment, financial satisfaction fosters it in societies with low and middle empowerment. This trend is quite stable and keeps its significance in the full model, as can be seen from Table 9.

The voluntary organization theory explaining 8.5% of individual and 49.1% of aggregate variance, does not work in societies with a low level of human empowerment (see Table 5 and Table 9). Emancipative values, active membership and open-access activities are important predictors of trusting in strangers under conditions of economic prosperity, effective democratic institutions and widespread emancipative orientations. Interestingly, there is a robust and significant cross-level interaction between values and empowerment, which implies the stronger impact of values on trust, while empowerment is increasing (see Table 9).

The informal relations theory gives the best results. Trust in known people has 17.5% and 63.3% of variation at the individual and country-level respectively. Its conductive effect remains stable across all societies and does not depend on the stage of human empowerment (see Table 6 and Table 9).

The town size reflecting the community theory catches 4.8% of the individual and 31.1% of the country-level variation. As Table 7 demonstrates, living in large cities has a detrimental but statistically insignificant influence on generalized trust across all societies. In addition, this variable has a lot of missing values, therefore, we excluded it from the subsequent analysis.

The societal conditions theory explains about 10% of the individual variance and 54% of country variance (see Table 8). Similarly to trust in known people, confidence in institutions does well in all countries. Moreover, human empowerment strengthens its impact (see Tables 7 and 8).

Regarding standard controls, it ought to be noted that female gender hinders generalized trust without respect to any societal environment. Age is significant for the promotion of trust in countries with middle and high empowerment. Education has a negative effect on trust in societies with low empowerment and a positive one in countries that have reached the higher stage (see Tables 3-9).

Table 3. Linear multilevel regression with trust in people met for the first time as a dependent variable and locus of control from personality theory

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.264(0.021)***	0.232(0.013)***	0.165(0.032)***
Country level			
Human empowerment	-0.162(0.076)*	-0.162(0.076)*	-0.162(0.076)*
Individual level			
Locus of control	0.028(0.017)	0.047(0.010)***	0.090(0.019)***
Female	-0.015(0.004)***	-0.011(0.002)***	-0.002(0.006)
Age	0.015(0.021)	0.075(0.013)***	0.203(0.031)***
Education	-0.033(0.015)*	0.036(0.009)***	0.186(0.358)***
Cross-level interaction with human empowerment			
x Locus of control	0.102(0.051)*	0.102(0.051)*	0.102(0.051)*
x Female	0.022(0.014)	0.022(0.014)	0.022(0.014)
x Age	0.306(0.072)***	0.306(0.072)***	0.306(0.072)***
x Education	0.358(0.048)***	0.358(0.048)***	0.358(0.048)***
Explained variance at the country-level		37.7%	
Explained variance at the individual level		5.9%	
N of countries		47	
N of respondents		63210	

Significance Levels: *** p<0.001, ** p<0.01, * p<0.5, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

Table 4. Linear multilevel regression with trust in people met for the first time as a dependent variable and variables from the success and well-being theory

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.243(0.024)***	0.204(0.014)***	0.120(0.031)***
Country level			
Human empowerment	-0.202(0.077)**	-0.202(0.077)**	-0.202(0.077)**
Individual level			
Subjective well-being	0.026(0.020)	0.057(0.011)***	0.125(0.016)***
Financial satisfaction	0.060(0.023)**	0.053(0.013)***	0.036(0.019)
Female	-0.016(0.004)***	-0.011(0.002)***	-0.001(0.006)
Age	0.018(0.0249)	0.074(0.015)***	0.195(0.031)***
Education	-0.044(0.016)*	0.026(0.011)*	0.178(0.052)***
Cross-level interaction with human empowerment			
x Subjective well-being	0.161(0.053)***	0.161(0.053)***	0.161(0.053)***
x Financial satisfaction	-0.040(0.061)	-0.040(0.061)	-0.040(0.061)
x Female	0.024(0.014)	0.024(0.014)	0.024(0.014)
x Age	0.288(0.078)***	0.288(0.078)***	0.288(0.078)***
x Education	0.361(0.052)***	0.361(0.052)***	0.361(0.052)***
Explained variance at the country-level		40.9%	
Explained variance at the individual level		6.7%	
N of countries		46	
N of respondents		61385	

Significance Levels: *** p<0.001, ** p<0.01, * p<0.5, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

Table 5. Linear multilevel regression with trust in people met for the first time as a dependent variable and variables from the voluntary organization theory

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.279(0.023)***	0.223(0.015)***	0.112(0.027)***
Country level			
Human empowerment	-0.271(0.070)***	-0.271(0.070)***	-0.271(0.070)***
Individual level			
Active membership	0.030(0.017)	0.043(0.010)***	0.043(0.010)***
Non-institutional protest	0.006(0.031)	0.017(0.007)**	0.040(0.014)***
Emancipative values	0.024(0.031)	0.077(0.017)***	0.191(0.033)***
Female	-0.018(0.004)***	-0.014(0.003)***	-0.006(0.005)
Age	0.011(0.022)	0.078(0.014)***	0.223(0.032)***
Education	-0.026(0.012)*	0.023(0.008)**	0.129(0.019)***
Cross-level interaction with human empowerment			
x Active membership	0.069(0.052)	0.069(0.052)	0.069(0.052)
x Non-institutional protest	0.056(0.037)	0.056(0.037)	0.056(0.037)
x Emancipative values	0.273(0.092)***	0.273(0.092)***	0.273(0.092)***
x Female	0.020(0.013)	0.020(0.013)	0.020(0.013)
x Age	0.345(0.076)***	0.345(0.076)***	0.345(0.076)***
x Education	0.253(0.043)***	0.253(0.043)***	0.253(0.043)***
Explained variance at the country-level	49.1%		
Explained variance at the individual level	8.5%		
N of countries	47		
N of respondents	61843		

Significance Levels: *** p<0.001, ** p<0.01, * p<0.5, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

Table 6. Linear multilevel regression with trust in people met for the first time as a dependent variable and trust in known people from the informal relations theory

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.101(0.017)***	0.064(0.010)***	-0.019(0.026)
Country level			
Human empowerment	-0.197(0.061)***	-0.197(0.061)***	-0.197(0.061)***
Individual level			
Trust in known people	0.309(0.017)***	0.0324(0.010)***	0.355(0.019)***
Female	-0.014(0.004)***	-0.011(0.002)***	-0.007(0.006)
Age	0.002(0.024)	0.058(0.014)***	0.180(0.029)***
Education	-0.032(0.015)**	0.028(0.008)***	0.158(0.019)***
Cross-level interaction with human empowerment			
x Trust in known people	0.074(0.051)	0.074(0.051)	0.074(0.051)
x Female	0.012(0.015)	0.012(0.015)	0.012(0.015)
x Age	0.310(0.042)***	0.310(0.042)***	0.310(0.042)***
x Education			
Explained variance at the country-level	63.3%		
Explained variance at the individual level	17.5%		
N of countries	47		
N of respondents	64388		

Significance Levels: *** p<0.001, ** p<0.01, * p<0.5, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

Table 6. Linear multilevel regression with trust in people met for the first time as a dependent variable and town size from the community theory

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.327(0.037)***	0.284(0.0200***	0.194(0.042)***
Country level			
Human empowerment	-0.216(0.116)	-0.216(0.116)	-0.216(0.116)
Individual level			
Town size	-0.022(0.029)	-0.017(0.016)	-0.007(0.203)
Female	-0.017(0.004)***	-0.013(0.002)***	-0.006(0.007)
Age	-0.014(0.004)	0.067(0.015)***	0.241(0.040)***
Education	-0.050(0.017)**	0.035(0.011)***	0.217(0.028)***
Cross-level interaction with human empowerment			
x Town size	0.023(0.076)	0.023(0.076)	0.023(0.076)
x Female	0.018(0.016)	0.018(0.016)	0.018(0.016)
x Age	0.150(0.094)***	0.150(0.094)***	0.150(0.094)***
x Education	0.424(0.062)***	0.424(0.062)***	0.424(0.062)***
Explained variance at the country-level		31.1%	
Explained variance at the individual level		4.8%	
N of countries		35	
N of respondents		42416	

Significance Levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.5$, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

Table 8. Linear multilevel regression with trust in people met for the first time as a dependent variable and confidence in institutions from the societal theory

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.205(0.024)***	0.170(0.014)***	0.096(0.029)***
Country level			
Human empowerment	-0.176(0.075)*	-0.176(0.075)*	-0.176(0.075)*
Individual level			
Confidence in institutions	0.150(0.027)***	0.199(0.013)***	0.310(0.022)***
Female	-0.017(0.004)***	-0.013(0.002)***	-0.003(0.006)
Age	0.001(0.222)	0.061(0.009)***	0.191(0.033)***
Education	-0.023(0.014)	0.039(0.010)***	0.173(0.020)***
Cross-level interaction with human empowerment			
x Confidence in institutions	0.251(0.074)***	0.251(0.074)***	0.251(0.074)***
x Female	0.023(0.014)	0.023(0.014)	0.023(0.014)
x Age	0.310(0.078)***	0.310(0.078)***	0.310(0.078)***
x Education	0.321(0.047)***	0.321(0.047)***	0.321(0.047)***
Explained variance at the country-level		53.9%	
Explained variance at the individual level		9.8%	
N of countries		47	
N of respondents		64241	

Significance Levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.5$, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

Table 9. Linear multilevel regression with trust in people met for the first time as a dependent variable and significant variables from all theories

	Coefficients for low level of human empowerment	Coefficients for middle level of human empowerment	Coefficients for high level of human empowerment
Intercept	0.049(0.028)	-0.039(0.017)*	-0.230(0.035)***
Country level			
Human empowerment	-0.455(0.089)***	-0.455(0.089)***	-0.455(0.089)***
Individual level			
Locus of control	-0.005(0.015)	0.004(0.009)	0.023(0.016)
Subjective well-being	0.003(0.011)	0.014(0.007)*	0.038(0.012)***
Financial satisfaction	0.040(0.018)*	0.031(0.010)**	0.012(0.015)
Active membership	0.003(0.017)	0.015(0.010)	0.041(0.018)*
Non-institutional protest	0.005(0.014)	0.016(0.008)*	0.040(0.014)***
Emancipative values	0.042(0.027)	0.084(0.015)***	0.172(0.30)***
Trust in known people	0.300(0.018)***	0.297(0.011)***	0.300(0.019)***
Confidence in institutions	0.082(0.026)***	0.127(0.014)***	0.225(0.020)***
Female	-0.011(0.004)**	0.013(0.002)***	-0.016(0.05)***
Age	-0.002(0.025)	0.061(0.015)***	0.196(0.027)***
Education	-0.026(0.013)*	0.009(0.008)	0.086(0.018)***
Cross-level interaction with human empowerment			
x Locus of control	0.046(0.042)	0.046(0.042)	0.046(0.042)
x Subjective well-being	0.057(0.034)	0.057(0.034)	0.057(0.034)
x Financial satisfaction	-0.046(0.047)	-0.046(0.047)	-0.046(0.047)
x Active membership	0.062(0.049)	0.062(0.049)	0.062(0.049)
x Non-institutional protest	0.056(0.040)	0.056(0.040)	0.056(0.040)
x Emancipative values	0.212(0.082)**	0.212(0.082)**	0.212(0.082)**
x Trust in known people	0.006(0.052)	0.006(0.052)	0.006(0.052)
x Confidence in institutions	0.232(0.069)***	0.232(0.069)***	0.232(0.069)***
x Female	-0.008(0.013)	-0.008(0.013)	-0.008(0.013)
x Age	0.323(0.074)***	0.323(0.074)***	0.323(0.074)***
x Education	0.184(0.043)***	0.184(0.043)***	0.184(0.043)***
Explained variance at the country-level		73.9%	
Explained variance at the individual level		21.1%	
N of countries		46	
N of respondents		57007	

Significance Levels: *** p<0.001, ** p<0.01, * p<0.5, robust standard errors in parenthesis. Calculations are done with HLM 7.0.

6. Conclusion and discussion

Following the multilevel approach (Beugelsdijk, 2009; Klein & Kozlowski, 2000) this study examined the issue of how macro conditions affect the influence of micro-level determinants, arguing that this approach may clarify contradicting and mixed findings about the nature of generalized trust. Compared to previous studies conducted in the framework of multilevel modeling (Delhey & Welzel, 2012; Geys, 2012; Gheorghiu et al, 2009; Hamamura, 2012; Newton & Zmerli, 2011; Park & Subramanian, 2012; Paxton, 2007; Robbins, 2011), this investigation simultaneously include:

a) broad data from countries that participated in the 5th round of the World Values Survey (2005-2008);

b) a new measure of generalized trust (e.i. trust in unknown people) which is free from the trust radius (Delhey et al., 2011; Sturgis & Smith, 2010; Lolle & Torpe, 2011) and trust-caution problems (Miller & Mitamura, 2003);

c) a rich set of possible determinants covering six trust theories suggested by Delhey and Newton (2003), emancipative values and non-institutional forms of protest as extra variables;

d) multilevel regression modeling with the interaction effects;

i) human empowerment, reflecting economic, cultural and institutional development as a country-level moderator.

Our analysis revealed that, at the country-level trust strangers and human empowerment are positively associated with each other. This evidence goes in line with previous findings (Delhey & Welzel, 2012) demonstrating the robustness of trust in unknown people as a corrected measure of generalized trust. However, in contrast to most previous research, we detected a non-linear dependence between trust and human empowerment, indicating that these relationships may be negative when societies begin to evolve from the lowest to the middle level of human empowerment. Since human empowerment spans economic, cultural and institutional dimensions, which are highly correlated (Welzel. 2013), our finding cautions against assigning generalized trust the role of facilitator in economic growth (Knack & Keefer, 1997; Whiteley, 2000; Zak & Knack, 2001). It also validates the result of two previous studies, which detect similar relationships between trust and economic development using traditional question asking about trust in most people (Peiró-Palomino & Tortosa-Ausina, 2013; Sarracino, 2011).

The multilevel regression analysis provides several interesting insights. As expected, the possible determinants of generalized trust differ across countries with low, middle and high human empowerment. Town size, which reflects community theory, has no impact on generalized trust, while the positive effect of personality characteristics, as measured through the locus of control, disappears in the full model. This evidence is in accordance with Delhey and Newton (2003) and Freitag and Traunmüller (2009)'s findings, none of whom managed to detect a significant link between the locus of control and generalized trust in Germany, Hungary, Slovenia, Spain, Switzerland and South Korea.

In general, the success and well-being theory performs well in all types of societies, but the impact of distinct indicators varies depending on the level of empowerment. Financial satisfaction promotes generalized trust in countries at its low and middle stage, whereas overall subjective well-being nurtures generalized trust when empowerment is of a middle and high level. These results are similar to Sulemana's (2014), who found no impact of well-being on trust in Ghana, and Sarracino (2013) who detected that relationships between trust and well-being are moderated by economic development and nonexistent in poor countries.

Voluntary organization theory is country specific. All its indicators, including active membership, non-institutional forms of protest (petitions, demonstrations and boycotts) and emancipative values, have no impact in societies with low human empowerment. However, they all work well when human empowerment reaches a high point. Since generalized trust can operate without associational membership and taking part in non-institutional forms of protest, formal voluntary organizations should no longer be considered as «schools of trust» (Putnam, 2001). It is more likely that voluntary organizations do not produce trust but instead, as Wollebæk and Selle note, «provide individuals with a democratic infrastructure, which can be activated when needed» and therefore in this way sustain generalized trust (Wollebæk & Selle, 2007: 1). Furthermore, the idea that trust and civic engagement are part of the same «social syndrome» (van Ingen & Bekkers, 2013) has limited support. Generalized trust is only positively associated with emancipative values in countries with middle and high human empowerment, where the importance of personal autonomy, tolerance, gender equality and freedom are stressed.

Trust in known people and confidence in institutions which reflect informal relations, and societal conditions theory all seem to be universal determinants of generalized trust, since they are significant in all kinds of societies. The positive impact of trust in known people is quite stable, while the influence of confidence in institutions is even stronger in highly developed countries. It is worth mentioning that associations between different types of trust (particularized, generalized and institutional) can theoretically indicate their endogenous nature. At the same time, there is no robust empirical evidence supporting such a suggestion. On the contrary, the scope of existing studies demonstrates that all these variables belong to different dimensions (Allum et al., 2010; Delhey et al., 2011; Freitag & Bauer, 2013; Uslaner, 2002).

Furthermore, it is plausible to incorporate this indicator in the analysis due to two theoretical reasons. First, the positive link between trust in a circle of acquaintances and generalized trust found in a number of studies, demonstrate that successful relationships with known people can be generalized to unknown people. Therefore, this could be considered as a precondition for trusting in strangers (Delhey & Welzel, 2012; Freitag & Traunmüller, 2009; Glanville & Paxton, 2007; Newton & Zmerli, 2011; Uslaner, 2002). Second, Delhey and Welzel (2012) argue that in the modern world, where a great proportion of daily interactions occur between unfamiliar people, this kind of generalized trust, which emerges independently of trust in close circle, is of greater importance. By that reason, it is necessary to control the influence of other variables for trust in people one knows personally.

The impact of female gender on generalized trust is weak but negative in all societies, whereas age is significant in middle and high developed countries. Unlike most previous studies (Alesina & La Ferrara, 2000; Brehm & Rahn, 1997; Delhey & Welzel, 2012; Geys, 2012; Helliwell & Putnam, 2007; Howard & Gilbert, 2008; Newton & Zmerli, 2011; Park & Subramanian, 2012; Paxton, 2007; Rahn et al., 2009; Robbins, 2011; Patrick Sturgis et al., 2009; van der Veld & Saris, 2012; van Oorschot et al., 2006; Wollebæk & Selle, 2007), we find that the impact of education on generalized trust is not universal and may be negative in countries where human empowerment is low and positive in countries where human empowerment is high. Our findings correspond to Buzasi`s (2015) study, which discovered that education in African countries had a negative impact.

This contradictory effect of education can be partly explained by adopting the idea of trust as social intelligence. According to Yamagishi (2011), trusting people is not naive or gullible. On the contrary, their trust is rooted in the ability to differentiate between trustworthy and untrustworthy people. Hooghe et. al (2012) incorporating representative NELLS population survey conducted in 2009 in Netherlands showed that cognitive ability, which can be treated as a proxy for social intelligence, mediates more than one third of trust and education relationships. Therefore, we can hypothesize that highly educated people living under conditions of economic insecurity, ineffectiveness of social institutions, absence of tolerance, gender equality and freedom of speech are more critical towards their social environment and thus tend be more distrusting.

Summing up, we can conclude that in societies with high level of human empowerment generalized trust is more closely associated with civic virtues (associational membership, non-institutional protest and emancipative values) and subjective well-being. In less developed countries it is rooted in financial satisfaction and low level of education. Taking into account that the greater part of trust studies has been conducted using European and American samples, the issue of why and how generalized trust emerges in African, Arab and Asian societies remains under-examined and requires a more detailed inspection in the future studies.

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Table 1. Operationalization of emancipative values [4]

Variables and Indexes	The procedure of construction	Questions in WVS5	Scale
Personal autonomy	Additive index	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? V12. Independence, V15. Imagination V21. Obedience	Dummy, 1 – mentioned, 0 – not mentioned (for Independence and Imagination) Dummy, 0 – mentioned, 1 – not mentioned (for Obedience)
Lifestyle tolerance	Additive index	Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between. V202.Homosexuality V203.Prostitution V204.Abortion V205.Divorce	10-point scale from 0 to 1
Gender equality	Additive index	For each of the following statements I read out, can you tell me how strongly you agree or disagree with each. V61. On the whole, men make better political leaders than women do. V62. A university education is more important for a boy than for a girl. V44. When jobs are scarce, men should have more right to a job than women.	4-point scale from 0 to 1 (for V.61 and V.62) 3-point scale from 0 to 1 (for V.44)

[4] Source: Welzel, 2013.

People`s voice	Additive index of Priority on People's National Say	V. 71 You had to choose, which one of the things on this card would you say is most important? V. 72 And which would be the next most important? Choice of "Giving people more say in important government decisions" item	3-point scale from 0 (absence of choice) to 1 (first choice)
	Additive index of Priority on Protecting Freedom of Speech	V. 71 You had to choose, which one of the things on this card would you say is most important? V. 72 And which would be the next most important? Choice of "Protecting freedom of speech" item	3-point scale from 0 (absence of choice) to 1 (first choice)
	Additive index of Priority on People's Local Say	V69. People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? And which would be the next most important? Choice of "Seeing that people have more say about how things are done at their jobs and in their communities" item	3-point scale from 0 (absence of choice) to 1 (first choice)

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